



Aspen Fire
Department

Snowmass-Wildcat
Fire Department

Pitkin County Wildland Fire Plan

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1. INTRODUCTION

In 2000, the Colorado Legislature passed legislation clarifying responsibilities for wildland fire management in the State. House Bill 1283 redefined the responsibilities of County Sheriffs, the State Board of Agriculture, and the State Forester to include the prevention, control and management of wildland fire. The Bill authorized Boards of County Commissioners to cooperate in managing as well as preventing and suppressing forest fires. The legislation authorized counties to prepare and implement a County Fire Plan.

The Pitkin County Wildland Fire Plan is intended to aid in the implementation of a seamless, coordinated effort among all relevant agencies in determining appropriate combinations of wildland fire management actions and programs in the county. The Pitkin County Wildland Fire Plan outlines six interagency management objectives that are necessary to achieve and implement effective wildland fire management programs:

1. Prevention
2. Preparedness
3. Mitigation
4. Suppression
5. Reclamation /Rehabilitation
6. Fiscal

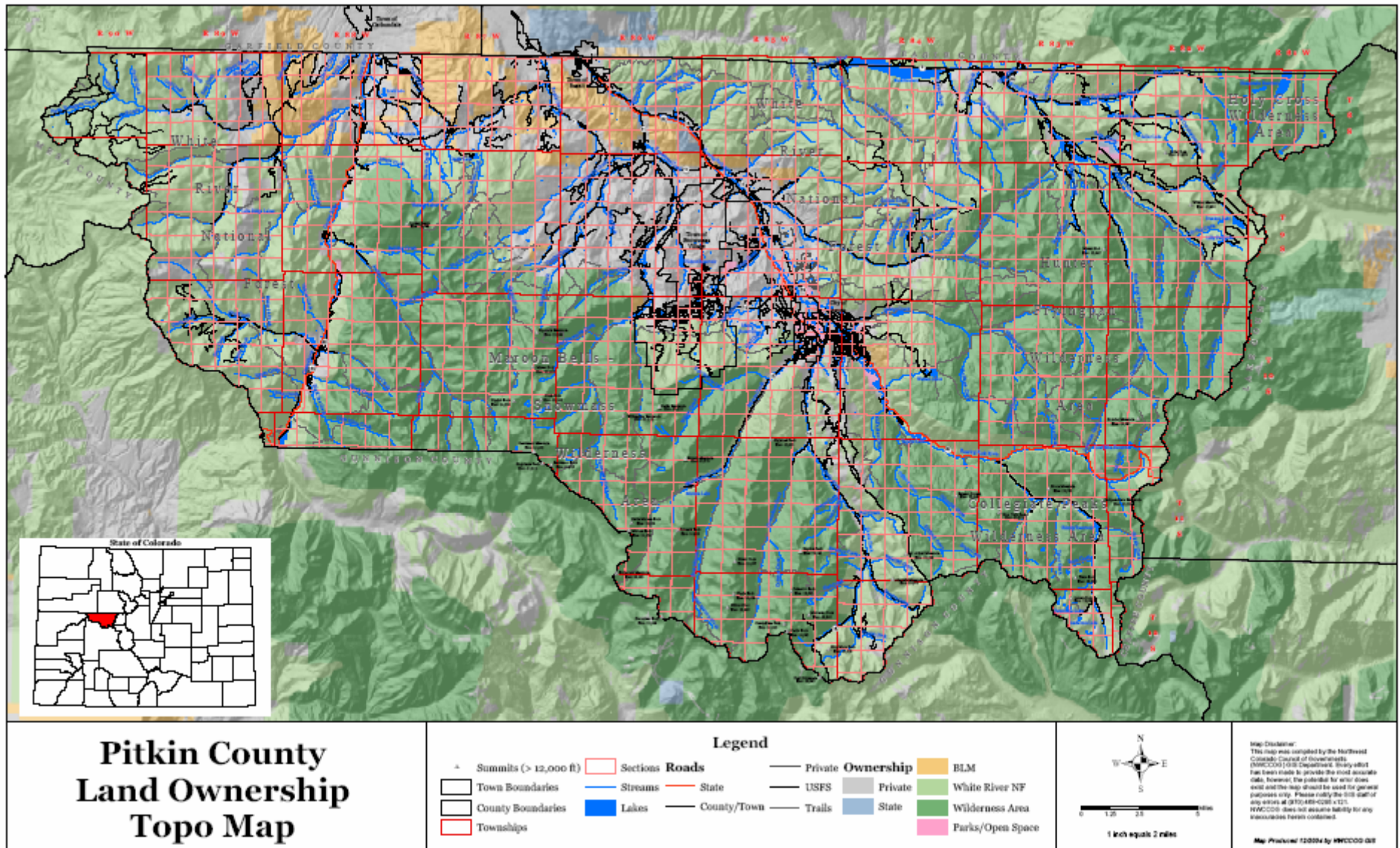
This plan identifies the roles and responsibilities of Pitkin County, the United States Forest Service—White River National Forest, Sopris and Aspen Ranger Districts (WRNF), Colorado State Forest Service-Grand Junction District (CSFS), Aspen Fire Protection District (AFPD), Snowmass-Wildcat Fire Protection District (SWFPD), Basalt & Rural Fire Protection District (BFPD), and Carbondale & Rural Fire Protection District (CFPD); specifies contacts for each agency; and lists interagency agreements to meet these objectives (*See Appendix I*). Activities needed to achieve the objectives are identified and prioritized. Each activity listed contains a brief description of the issue, background information, and specifies agencies involved, estimated costs, funding sources and estimated completion date. Additionally, this Wildland Fire Plan is intended to assist landowners/managers in identifying and mitigating wildland fire hazard areas on public and private land and to work cooperatively in developing mitigation options to reduce the impact of a wildland fire.

The Pitkin County Wildland Fire Plan is a dynamic document. Activities are expected to be added or deleted under each management objective as the issues within the County change or activities are completed.

1.1. Authority

The Pitkin County Wildland Fire Plan is being prepared and implemented among various governmental authorities under a Memorandum of Understanding. This agreement establishes a mutual commitment to the mission and objectives outlined in the Pitkin County Wildland Fire Plan to facilitate interagency collaboration in the implementation of a wildland fire program in Pitkin County (*See Appendix II*). This plan is consistent with the Healthy Forests Restoration Act, and guidance from the Colorado State Forest Service.

1.2. Pitkin County Land Status Map



2. Pitkin County Characteristics

2.1. County Land Status

Pitkin County is located in west-central Colorado. Pitkin is the 24th largest county in the state out of 64 counties, encompassing approximately 975 square miles (626,832 acres). The ownership of the County is dominated by United States Department of Agriculture, Forest Service lands, of which 490,760 acres (78% of the County) is owned by the White River National Forest, 27,915 acres (4.5%) is owned by the Bureau of Land Management, 800 acres (less than 1%) is owned by the State (primarily the Colorado Division of Wildlife), and 107,358 acres (17%) is privately held. Pitkin County's population is estimated at 15,000 (according to the 2003 census), and the median cost of a home in Pitkin County is \$750,000. [Link to land status map](#)

The majority of private lands and homes are located along the major river corridors- the Roaring Fork and Crystal River valleys. Other homesites and developments follow other river drainages, including the Fryingpan River, Snowmass Creek, Woody Creek, Castle Creek, Conundrum Creek and East Sopris Creek. However, many of the new developments are occurring further from these main corridors, moving up onto hillsides and areas with more remote access. [Link to Aspen/Snowmass Map](#). [Link to Roaring Fork Map](#). [Link to Upper Fryingpan Area Map](#). [Link to Crystal River Area Map](#).

Pitkin County is unique in its fire suppression, given that so much of the county is dominated by higher elevation fuel types that burn infrequently, and that more urban areas are located in areas surrounded by National Forest lands. Initial attack and extended attack is often done by the local Fire Protection Districts, with the support of the USFS and BLM. Opposite to what occurs in Pitkin County, in other areas around the state with more frequent wildfires, the Federal fire fighting resources are often more heavily involved with initial attack, with support from local FPDs. [Link to Map of Fire Protection Districts](#).

2.2. Geography

Pitkin County is dominated by several large mountain ranges. The Elk Mountains roughly form the western and southern sides of the county, while the Sawatch Range runs the eastern boarder of the county. In between these mountain ranges, valleys hold the majority of the population, as well as private lands. The elevations in the county range from 6,250' along the Crystal River south of Carbondale, to over 14,000' on a number of peaks in the Maroon Bells/Snowmass Wilderness Area. The majority of Pitkin County is dominated by high elevation forests and alpine environments, with the lower valleys dominated by irrigated farmlands and urban/suburban developments. In between the high elevation forests and alpine habitats and the lower farmlands lay pinion/juniper woodlands, oakbrush stands, aspen forests, lodgepole pine forests, and much of the rural population.

Rainfall in the county widely varies, from over 48" in the Maroon Bells, to a dry 13" in the lower Crystal River valley south of Carbondale, with average rainfall around 23".

2.3. Fire History

Wildland fire occurrence in Pitkin County is tracked by three agencies. The zoned management of the White River National Forest/Bureau of Land Management, records fire data from Federal lands. Colorado State Forest Service (CSFS) keeps records of fires on state and private lands. CSFS statistics only reflect those wildland fires reported by local fire departments.

As with most areas in Colorado, the majority of fires started are from human-caused (including equipment) ignitions. Likewise, only a few of the fires in the County end up accounting for the majority of acreages burned.

3. Pitkin County Wildland Fire Hazard Identification

Pitkin County has adopted the use of the Colorado State Forest Service's state-wide Wildfire Hazard Map and the tools used in its development (Geographical Information System based analysis). This map takes into consideration slope, aspect, fuel types, potential ignition sources, housing density, road density, and lightning strikes. At the County scale, this map is very accurate. In some areas around subdivisions, this map is not entirely accurate, but aside from a high resolution site-specific mapping effort, the CSFS map has shown to be accurate enough for the vast majority of planning efforts within the County. [Link to CSFS Risk Map \(Probability of Ignition\)](#). [Link to CSFS Wildland Fire Hazard Map](#). [Link to CSFS Values at Risk \(Life and Property\) Map](#). [Link to Wildland Fire Map \(Risk + Hazards + Value\)](#).

As part of the analysis process in determining wildland fire risk and hazards, we utilized the Colorado State Forest Service's model, but further enhanced the accuracy of the assessment by utilizing more accurate USDA Forest Service Vegetation Data, as well as GAP vegetation data from the State, and finally Pitkin County's own vegetation data layer. Using these other vegetation data resources, we produced more Wildland Fire Hazard Maps. [Link to USFS/GAP Wildland Fire Hazard Map](#). [Link to USFS/Pitkin Wildland Fire Hazard Map](#).

We then produced maps using the more accurate USFS/GAP and Pitkin County vegetation data layers, and used the existing CSFS Values (Life and Property) data to produce overall Wildland Fire Hazard (Risk + Hazards + Values) Maps. [Link to USFS/GAP Wildland Fire Map \(Risk + Hazards + Value\)](#). [Link to USFS/Pitkin Wildland Fire Map \(Risk + Hazards + Value\)](#).

For all new construction in the County, the land owner/applicant must complete a 1041 Hazards Analysis. This analysis includes a wildfire hazard assessment for the homesite. Based on fuels, slope, aspect and access, construction sites are rated as a Low, Medium or High hazard area. All new or additional permitted construction is required to have supplemental fuels mitigation (thinning) as defined by a qualified wildfire professional for low, medium and high hazard sites. Homes within a High Hazard area have more stringent building materials and construction requirements that must be incorporated into the building design prior to permit approval. At this time, older and existing homes that have not gone through a 1041 review are not being inspected under the 1041 guidance, but may be inspected by local Fire Marshals, the Colorado State Forest Service, local Fire Departments, or County approved fire experts by owner request, or the Fire Marshals discretion. The 1041 Wildfire Mitigation guidance from the Pitkin County Land Use Code can be found in *Appendix III* of this document.

4. Interagency Cooperation

Since Pitkin County encompasses a mosaic of land ownership and jurisdictional boundaries, interagency cooperation is essential not only for wildland fire suppression but also for prevention, preparedness, mitigation, reclamation / rehabilitation, and fiscal issues to provide efficient and effective wildland fire programs. Currently, all fire agencies within Pitkin County are working aggressively to provide a consistent and unified approach to most fire programs regardless of ownership. However, differences do exist between agencies due to internal policies and procedures as well as land base and jurisdictional boundaries.

4.1. USFS & BLM Coordination

(Taken from BLM/USFS internal documents) The Upper Colorado River Interagency Fire Management Unit is a fully integrated fire management program with the BLM Western Slope Center, the Grand Junction BLM Field Office, the Glenwood Springs BLM Field Office, the White River National Forest, and the Grand Valley Ranger District of the Grand Mesa, Uncompahgre and Gunnison National Forests. The Upper Colorado River Interagency Fire Management Unit (UCR) provides preparedness, suppression, prevention and fuels management services to the above units.

Each agency maintains discrete budgeting, staffing and support services which are combined where appropriate to increase program effectiveness and efficiency to participating units. The following discussion is limited to the Bureau of Land Management's portion of the program with references to the interagency staff unit where appropriate.

Current Fiscal Year Budget and the Ability to Support Planned and Unplanned Actions

Program Leadership – The BLM portion of the interagency fire management program consists of a Unit Fire Management Officer and an Assistant Fire Management Officer for Operations. The Forest Service contributes an Assistant Fire Management Officer for Fuels and Aviation. Both The BLM and the Forest Service contribute to funding a Zone Fire Management Officer and Assistant Fire Management Officer to manage each of the three Zones that make up the Unit.

Preparedness –The UCR budget allocation includes funding for fire management activities on the Grand Junction and Glenwood Springs Field Offices and the White River National Forest. The BLM funds and staffs the following fire management resources:

- 2 Type 4 engines
- 6 Type 6 engines
- 1 Type 3 Helicopter with 5 crewmembers
- 1 Interagency Dispatch Center
- 1 Type 1 Air Tanker Base

The FS funds and staffs the following fire management resources:

- 1 Type 4 engine
- 4 Type 6 engines
- 2 Initial Attack Squads
- 5 Helicopter crewmembers

Engines are only staffed five days per week due to the lack of qualified assistant engine foremen and operational efficiency. The helitack crew is staffed seven days per week with a total of ten crewmembers funded by the Forest Service and the Bureau of Land Management.

Interagency Dispatch – The interagency dispatch center is located at the Grand Junction Air Center at Walker Field, Grand Junction, Colorado. The BLM is responsible for the facilities management, utilities, and fees associated with the air center. The BLM also staffs the following non-seasonal positions:

- Air Center Manager (GS-455-11)
- Assistant Air Center Manager, Ramp and Facilities (GS-455-09)
- Lead Initial Attack Dispatcher (GS-455-07)
- Lead Aircraft Dispatcher (GS-455-07)
- Air Tanker Base Manager (GS-455-07)

The FS staffs the following non-seasonal positions:

- Assistant Air Center Manager, Dispatch (GS-455-09)
- Initial Attack Dispatcher (GS-455-06)
- Aircraft Dispatcher (GS-455-06)

Fuels Management – The fuels management program is the responsibility of the fire ecology section of the fire management staff. Prescribed fire is conducted with the support of the operations staff. The BLM also hosts a fire use module for prescribed fire and wildland fire use events. The BLM funds and staffs the following fuels positions:

- 1 Fire Ecologist
- 1 Fuels Specialist
- 2 Fuels Planners

The FS funds and staffs the following fuels positions:

- 1 Fire Ecologist
- 1 Fuels Planner
- 2 Fuels Specialists

Cooperative Agreements and Interagency Contacts

The BLM conducts the fire management program with Federal and State partners under the terms of the following agreement:

Colorado Interagency Cooperative Fire Management Agreement – between the USDI, Bureau of Land Management, Colorado; USDA Forest Service, Region 2; USDI National Park Service, Intermountain Region; USDI Fish and Wildlife Service, Mountain and Prairie Region; USDI

Bureau of Indian Affairs, Southwest Region and Colorado State Forest Service.

This agreement establishes statewide authority for interagency fire protection assistance and cooperation between the above agencies for mutual cooperation in fire training, prescribed fire, prevention, preparedness and suppression activities.

At the Unit level, the Bureau of Land Management and White River National Forest have a Memorandum of Agreement that provides the basis for interagency fire management activities and the exchange of funds via reimbursable agreements to support the interagency staff unit.

Both the BLM and Forest Service are signatories to coop fire plans for each county within the affected jurisdictions that are executed on an annual basis to provide for cooperative fire management activities between affected Federal and local jurisdictions.

Copies of these plans are available on CD from agency fire management staff and or Colorado State District Foresters.

4.2. Agency Responsibilities

4.2.1. Prevention

With the exception of enforcement, wildland fire prevention is a shared responsibility of all agencies. Education and information associated with wildland fire is not jurisdictional and relates to all land ownership. Education and awareness materials are available through all partnering agencies. The USFS and BLM responsibility for enforcement of wildland fire prevention is tied to primary Federal lands respectively. The Fire Protection Districts enforce wildland fire prevention on private lands, with support from the Colorado State Forest Service. All agencies cooperate to establish restrictions and closures when wildland fire conditions meet pre-established criteria outlined in the Pitkin County Annual Operating Plan (AOP) (See *Appendix IV*). Pitkin County Emergency Services provides support as requested for preparedness.

4.2.2. Preparedness

USFS/BLM responsibility is primarily tied to Federal lands within the County. The CSFS and Fire Protection Districts (FPD) assist all agencies, communities and associations with fire planning, readiness and wildland fire hazard identification. All agencies share responsibility to coordinate and cooperate in mitigation planning, pre-attack planning and communication with the public and the news media. When high fire hazard conditions exist (i.e. high fire danger ratings) then FPDs and Federal agencies coordinate through monthly meetings while these elevated fire danger conditions persist.

4.2.3. Mitigation

USFS/BLM fuels reduction implementation is tied primarily to Federal lands. The CSFS has coordinated and assisted on fuel reduction projects on state and private lands. Recent agreements allow for cross-jurisdictional fuel reduction project planning and implementation. Pitkin County's 1041 Hazard Assessment was established to provide mandatory building and

land use codes to reduce wildfire hazards, and to require individual wildland fire hazard site inspections and assessments in order to minimize and mitigate fuels hazards and unsafe building materials. These regulations were adopted to reduce the hazards to homeowners as well as firefighters and first responders.

4.2.4. Suppression--Wildland Fire

4.2.4.1.Fire Protection Districts

The Fire Protection Districts are responsible for all wildland fire suppression activities on private and State lands within their fire districts. However, by state statute the Pitkin County Sheriff has ultimate authority over all fires on state and private lands in the county. FPD's typically handle routine wildfire suppression within their districts and rely on the Sheriff to summon additional assistance as needed. Initial control actions can and usually are taken by fire protection districts or Federal firefighters dispatched by the Grand Junction Interagency Dispatch Center (GJC), or Aspen-Pitkin County Communications Center (APCCC). Please see the AOP in *Appendix IV* for more information.

4.2.4.2.Colorado State Forest Service

The Colorado State Forest Service will, upon request, assist all agencies on wildland fires within Pitkin County. The CSFS will assume duties as specified under provisions of the Emergency Fire Fund when a forest fire exceeds the county's resources, upon agreement of the Pitkin County Sheriff or designated representative and the State Forester or designated representative (please see the AOP in *Appendix IV*).

4.2.4.3.United States Forest Service/Bureau of Land Management

The USFS/BLM is responsible for all fire management activities on Federal lands. The GJC will notify local FPDs of fires on federal lands through the APCCC due to the close proximity of many FPDs to federal lands (please see the AOP in *Appendix IV*).

4.2.5. Reclamation/Rehabilitation

The US Forest Service and Bureau of Land Management are responsible for burn area emergency rehabilitation (BAER) on affected National Forest lands and BLM lands. Close coordination and cooperation with other agencies is necessary to determine values at risk that may be affected by BAER activities on adjacent lands. CSFS provides technical assistance to property owners, with consulting and financial support of the Natural Resources Conservation Service. Pitkin County can coordinate with other County departments, state and federal agencies to assist private landowners affected by wildland fire occurrence.

4.2.6. Fiscal

Funding for prevention, preparedness, mitigation and burn area rehabilitation by USFS/BLM personnel is tied to Federal lands. The Colorado State Forester administers the Emergency Fire Fund (EFF) for those Colorado counties that contribute to the fund. Pitkin County contributes annually to this fund. At the Pitkin County Sheriff's request, the CSFS District may request EFF designation from the State Forester. If approved, EFF will reimburse county

suppression costs according to the current Annual Operating Plan (AOP), the master EFF agreement, and as agreed to for the specific incident. The CSFS will request Federal Emergency Management Agency reimbursement for qualified suppression costs according to the most current agreements. CSFS administers various grants to assist local fire departments and property owners as funds are available for suppression, training and other projects.

5. Prescribed Fire—Agency Roles and Responsibilities

Definition: Any fire ignited by management actions under certain predetermined conditions to meet specific resource management objectives. A written, approved prescribed fire plan must exist, and agency requirements must be met prior to ignition.

5.1. USFS/BLM

USFS/BLM objectives are: to use fire from management ignitions in a safe, carefully planned, and cost effective manner to benefit, protect, maintain, and enhance natural resources; to reduce future fire suppression costs; and, to the extent possible, to restore natural ecological processes. Prescribed fire refers to the planning and implementation of management-ignited wildland fires to accomplish specific, pre-stated resource management objectives as defined in the Environmental Analysis and accomplished through the interdisciplinary team process. At least once a year, district staff should meet with local cooperators to discuss future and current fuels projects. Typically, the meetings should include the local FPDs staff and local representatives of the Colorado State Forest Service. Discussions should revolve around where to initiate new projects in the urban-wildland intermix.

Prior to implementation, the following requirements are fulfilled:

- Prepare and approve burn plan
- Obtain smoke permit
- Prepare communications plan
- Prepare monitoring plan
- Provide advance notification to State smoke regulators and (through the Dispatch Center) to area cooperators
- Provide advance notification to news media, elected officials and neighbors as described in the communications plan
- Complete a project file including the components required in the burn plan

5.2. Colorado State Forest Service

CSFS will assist agencies and individuals with the planning and implementation of prescribed fire to accomplish specific resource management objectives. Costs to individuals and agencies of projects are determined according to current CSFS policy.

5.3. Pitkin County

Currently, Pitkin County allows only slash burning and agricultural burning, and at this time does not have guidance regarding prescribed fire for forest health or fuels reduction on private lands. Given the fuels and the size of most private parcels, it is unlikely that private property owners would conduct prescribed fires, however if they did, Pitkin County could likely grant them a “one-

time” permit.

5.4. Colorado Department of Public Health and Environment

Colorado Department of Public Health and Environment (CDPHE) requires air quality permits for burns conducted by USFS/BLM and CSFS. Other agencies should verify that predicted smoke production of the proposed burn does not require a CDPHE smoke permit. Most private land burns are covered by an agricultural burn permit, which does not require written notification to CDPHE.

6. County Fire Plan—Detailed Layout

The County Fire Plan identifies six management objectives essential to achieve this plan’s mission statement. These management objectives include:

- Prevention
- Preparedness
- Mitigation
- Suppression
- Reclamation / Rehabilitation
- Fiscal

For each of the management objectives, contact positions and phone numbers are listed for each agency. Additionally, any agreement that refers to a particular management objective is also listed. A reference appendix will be created that will contain a copy of each agreement. Each management objective lists a statement that summarizes the goal and objective, plus activities that need to be accomplished to meet the objectives and the overall mission statement. For each activity listed, a brief background is provided, along with agencies involved, priority, status, estimated costs, funding sources and completion schedule. Pitkin County Emergency Management will serve as the primary agency for all listed activities.

6.1. Annual Review

An interagency group will review the Pitkin County Wildland Fire Plan, management objectives and activities listed to ensure that objectives are being accomplished by March 1. Activities will likely be added to and removed from the plan due to completion of projects and changes in priorities. Pitkin County Emergency Management will serve as the lead agency and coordinate updates and annual reviews. Future activities can be submitted by any Pitkin County resident to the interagency group for review and addition to the year’s County Fire Plan.

The form on the following page should be utilized for activity submittal.

Activity Submittal Form

Nominating agency _____

Primary Contact _____

Date _____

Activity _____

Background

Agencies Involved _____

Estimated Costs _____

Funding Sources _____

Schedule _____

7. Management Objectives

Agency Contacts:

USFS	Aspen & Sopris R.D. Fire Management Officer	970-963-2266
BLM	Glenwood Springs Field Office	970-945-2341
CSFS	Grand Junction District	970-248-7325
Pitkin County Emergency Management	Ellen Anderson, Emergency Management Coordinator	970-920-5234
Aspen FPD	Darryl Grob, Fire Chief	970-925-5532
Basalt & Rural FPD	Jerry Peetz, Ops Dir.	970-704-0675
Carbondale & Rural FPD	Ken Motsenbocker- Mit. Officer	970-963-2491
Snowmass-Wildcat FPD	John Mele	970-923-2212

7.1. Prevention

Reduce human caused wildfire ignitions through information, education and enforcement.

Activity (P1) Improve public awareness

Background

The individual property owner/occupant has the primary responsibility to protect their property from a wildland fire event. Only limited numbers of citizens in the general public are aware of the wildland fire threat. Information is available, but a coordinated approach to educational outreach is needed.

Agencies

Pitkin County (website), CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD

Priority

High

Status

Ongoing

Estimated Costs

Staff time

Funding Sources

Existing programs and supplemental funds/grants (CSFS?)

Schedule

Annually

Activity (P2) Develop an on-line catalog that includes an interagency listing of all wildland fire education materials

<u>Background</u>	Some of the FPDs and Federal agencies have lists (but maybe not current) on wildfire education materials available. Citizens and fire departments should be able to view materials on a web site and order materials if needed
<u>Agencies</u>	Pitkin County (website), CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Some agencies have these resources
<u>Estimated Costs</u>	\$1000 to update web-pages, \$500 annually to deliver products, \$1000 annually to purchase and restock materials
<u>Funding Sources</u>	Existing programs and supplemental funds/grants (CSFS?)
<u>Schedule</u>	March, 2005

Activity (P3) Improve wildfire reporting process for private and state lands, and make compatible with Federal reporting

<u>Background</u>	Provide fire departments an efficient process to report wildfire events. Online wildfire reporting has been developed in other parts of the state with success.
<u>Agencies</u>	CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing
<u>Estimated Costs</u>	Possible training costs, computer equipment & software, staff time
<u>Funding Sources</u>	Grants (CSFS, FFAF)
<u>Schedule</u>	End of 2004

Activity (P4) Develop ways to update news media and Pitkin County residents of the current wildfire danger

<u>Background</u>	Utilize news media outlets and Public Information Officers to inform the citizens of current wildland fire danger. I.e. More Smokey Bear signs and use of CDOTs highway informational signs.
<u>Agencies</u>	USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Some programs in place
<u>Estimated Costs</u>	Staff time, some training costs, \$2,000 per Smokey Bear sign.
<u>Funding Sources</u>	Supplemental funds/grants (CSFS?)
<u>Schedule</u>	March, 2005

7.2. Preparedness

Plan the most effective level of resources to protect human and natural resources

Activity (Pr1) Enforce/Improve road signs and posted address numbers in rural Pitkin County

Background

The County's current road signage and site addressing system has many gaps where road signs are absent and home addresses conflict with official records. Although current road naming and site addressing is occurring through the Community Development and Building departments, many serious deficiencies exist in older platted subdivisions, on metes & bounds parcels, and in 35+ acre developments. Emergency service personnel and parcel delivery companies are often unable to locate properties quickly or at all, due to the lack of a road name and/or a site address. Due to inaccurate or inadequate information provided by property owners, many properties have received address numbers that are not accurate, further adding to the confusion. A major barrier to overcoming the many deficiencies of the current system is likely to be resistance by some property owners to naming their road, changing their address, or funding the posting of road signs in subdivisions

Agencies

Pitkin County (Community Development, GIS, Emergency Management)

Priority

High

Status

Does not exist

Estimated Costs

\$40,000

Funding Sources

Existing funding sources and grants (NWCCOG, FFAF, DHS).

Schedule

Submit grants ASAP

Activity (Pr2) Develop local PIO, IMG and Type 3 teams for local incidents

<u>Background</u>	In 2000 the CSFS held trainings to develop Wildfire Hazard Education Teams (WHET) to conduct wildland fire hazard mitigation informational meetings for residents, homeowners associations, county officials and other stakeholders who live in outlying areas of a fire incident. The teams will assist and work cooperatively with local agency, county, FPDs, and incident Public Information Officers (PIO) during and immediately following a wildland fire incident. A local Incident Management Group or Type 3 Incident Management Team needs to be developed for managing wildfire suppression incidents, working towards NWCG qualifications for all members.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Structure exists, but local involvement may be lacking. Investigate option of having someone from Aspen-Pitkin County Communications Center trained as a PIO for wildfire events
<u>Estimated Costs</u>	Training costs
<u>Funding Sources</u>	Existing program funds and grants
<u>Schedule</u>	May 2005

Activity (Pr3) Assist in development of evacuation plans

<u>Background</u>	Evacuation during a wildland fire event continues to be a problem in the urban/wildland interface. Assisting local fire departments with the development of warning and evacuation systems and protocols will be an overall benefit to the communities at risk. Education of area residents about warning and procedures through mailings, door hangers and public meetings is critical to the success of an evacuation plan.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing- site dependant
<u>Estimated Costs</u>	County and fire department staff time
<u>Funding Sources</u>	Existing programs and supplemental funds/grants
<u>Schedule</u>	December 2005

Activity (Pr4) Assist in development of pre-attack plans (prioritize subdivisions)

<u>Background</u>	Coordination of Federal and State agencies with local FPDs with the development of a pre-attack plan for subdivisions or developments within their particular response area is essential in preparing both the emergency response agencies and the residences in the area for a wildland fire event. To build consistency and credibility, it is anticipated that the CSFS Wildfire Hazard Mitigation & Response Plan or the Community Wildfire Protection Plan formats will be utilized for all plans.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	Medium
<u>Status</u>	Ongoing- site dependant
<u>Estimated Costs</u>	Agency staff time and fire department staff time
<u>Funding Sources</u>	Existing programs and supplemental funds/grants
<u>Schedule</u>	Prioritize subdivisions that should have plans in early 2005, begin planning process in 2005.

Activity (Pr5) Re-project Pitkin County aerial photos into UTM.

<u>Background</u>	In 2003 Pitkin County had all private lands in the county aerially photographed at a high resolution. These photos are in State Plan projection, and are difficult for many other agencies to use (such as USFS, BLM, CSFS, etc.) as their GIS systems are in UTM projection. These new photos could be very useful for planning fuels projects, evacuation plan, and during emergencies when Federal agencies are involved.
<u>Agencies</u>	Pitkin County GIS, CSFS, USFS/BLM
<u>Priority</u>	Medium
<u>Status</u>	Does not exist
<u>Estimated Costs</u>	County GIS staff time
<u>Funding Sources</u>	Existing programs
<u>Schedule</u>	December 2004

Activity (Pr6) Determine additional fire equipment/personnel needs and locations

<u>Background</u>	As the wildland-urban interface continues to expand and more structures are built, and historically “non-hazardous” fuel types are now active “players” in wildfires, planning for the additional fire equipment and personnel needs and locations for resources is becoming an interagency issue
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	Medium
<u>Status</u>	Does not exist (maybe in some individual agencies)
<u>Estimated Costs</u>	Staff time
<u>Funding Sources</u>	Existing programs and supplemental funds/grants
<u>Schedule</u>	December 2004

Activity (Pr7) Coordination and dissemination of burn restriction information

<u>Background</u>	Guidelines exist within the AOP for determining the need for fire restriction and/or fire closures. Information as well as implementing or lifting closures/restrictions shall be coordinated with all agencies. Agencies should also discuss agricultural burning policies.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing
<u>Estimated Costs</u>	Staff time
<u>Funding Sources</u>	Existing programs
<u>Schedule</u>	March 2005

7.3. Mitigation

Plan and implement action to reduce potential negative impacts on human and natural values from wildland fire

Activity (M1) Provide citizens with an economical and efficient means of disposal for slash generated during wildland fire mitigation projects

<u>Background</u>	Disseminate information on what the Pitkin County dump charges for slash disposal, and encourage slash disposal programs through local FPDs similar to what Carbondale FPD has done in the past.
<u>Agencies</u>	AFPD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing
<u>Estimated Costs</u>	\$15,000 annually
<u>Funding Sources</u>	Grants
<u>Schedule</u>	Annually, grants required

Activity (M2) Develop mitigation demonstration sites in various fuel types

<u>Background</u>	Fuels mitigation demonstration sites can be created in various areas around the county, in different fuel types to illustrate that fuels mitigation is not a “clear cut” approach. Have before and after photos of techniques posted on multiple web sites for the public to access, and have posters made to bring to community events.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFPD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	In progress at Conundrum
<u>Estimated Costs</u>	\$20,000
<u>Funding Sources</u>	Existing programs and grants
<u>Schedule</u>	March 2005

Activity (M3) Continue to conduct required and voluntary wildfire hazard inspections and disseminate info to FPDs.

<u>Background</u>	The Pitkin County 1041 code mandates required inspections for new construction and any project that goes through a 1041. Information on structures and subdivisions that are up to county code with regards to defensible space should be disseminated to local FPDs.
<u>Agencies</u>	Pitkin County GIS & Community Development, CSFS, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing
<u>Estimated Costs</u>	Staff time
<u>Funding Sources</u>	Existing programs
<u>Schedule</u>	Ongoing

Activity (M4) Prioritize needed Community Wildfire Protection Plans for subdivisions

<u>Background</u>	Using the CSFS wildfire hazard maps and local knowledge, prioritize subdivisions in the county that should have Wildfire Plans completed. Agencies will then need to work with subdivisions and/or homeowners associations to determine funding and cooperation
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, AFD, SWFPD, BRFPD, CRFPD, contractors
<u>Priority</u>	High
<u>Status</u>	Has begun with a few subdivisions in AFD's area.
<u>Estimated Costs</u>	\$5,000 to \$10,000 per subdivision
<u>Funding Sources</u>	Grants and homeowners
<u>Schedule</u>	Target subdivisions by February 2005

Activity (M5) Identify cross-boundary fuel reduction projects

<u>Background</u>	Under existing agreements CSFS, USFS/BLM are working together to identify cross-boundary fuel reduction projects within the wildland urban interface. Projects will focus on area where agencies have planned actions to address environment and watershed issues and where residents have expressed interest and support.
<u>Agencies</u>	CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Ongoing
<u>Estimated Costs</u>	Staff time and project dependant
<u>Funding Sources</u>	Existing programs and grants
<u>Schedule</u>	Annual review

Activity (M6) Develop ways to update news media and Pitkin County residents of the current wildfire danger (and P4)

<u>Background</u>	Utilize news media outlets and Public Information Officers to inform the citizens of current wildland fire danger. More Smokey Bear signs?
<u>Agencies</u>	USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Some programs in place
<u>Estimated Costs</u>	Staff time, some training costs, \$2,000 per Smokey Bear sign.
<u>Funding Sources</u>	Supplemental funds/grants (CSFS?)
<u>Schedule</u>	March, 2005

7.4. Suppression

Use appropriate strategies and tactics for safe and cost effective protection of human and natural resource values from wildland fire

Activity (S1) Pitkin County resource list

<u>Background</u>	Building on the list of resources in the AOP, include NWCG qualified personnel and qualification levels to improve multi-agency resource use, and training opportunities. This could be a useful tool also on prescribed fires. Utilize the Individual Qualifications System (IQS) database for tracking.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	City of Aspen is compiling list at this time
<u>Estimated Costs</u>	Staff time
<u>Funding Sources</u>	Existing programs
<u>Schedule</u>	Winter 2004-2005

Activity (S2) Pitkin County Annual Operating Plan (AOP)

<u>Background</u>	The Pitkin County AOP defines the current suppression relationship and fire business management practices among local, county, state and federal wildland fire suppression resources in Pitkin County. This document is reviewed and signed by the Pitkin County Commissioners, PCSO, USFS, CSFS, BLM and local FPDs annually.
<u>Agencies</u>	Pitkin County Sheriffs Office, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Complete
<u>Estimated Costs</u>	Existing program
<u>Funding Sources</u>	Existing budgets
<u>Schedule</u>	Annual review

Activity (S3) Mutual aid agreements

<u>Background</u>	Rapid mobilization of resources after initial reports of wildland fire is critical in keeping fires small and reducing the risk to lives and property. To insure maximum resource response, mutual aid agreements are maintained among the FPDs in Pitkin County. These agreements allow each agency to tap closest resources to assist them on wildland fires without consideration for reimbursement for costs for the first 12 hours on the incident.
<u>Agencies</u>	Pitkin County Sheriffs Office, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Complete
<u>Estimated Costs</u>	Agency staff time
<u>Funding Sources</u>	Existing budgets
<u>Schedule</u>	Annual review

Activity (S4) Coordinated communications

<u>Background</u>	Various radio systems and frequencies are in use throughout Pitkin County. The listing of these frequencies and use are detailed in the AOP. The Pitkin County Sheriffs Department should ensure that these lists are available to other fire fighting agencies in the area, and likewise the FPDs should have lists of Federal fire fighting radio frequencies, and possibly have some radios on-hand that are pre-programmed to federal frequencies..
<u>Agencies</u>	Pitkin County Sheriffs Office, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	High
<u>Status</u>	Completed
<u>Estimated Costs</u>	Agency staff time
<u>Funding Sources</u>	Existing budgets- DOLA funds
<u>Schedule</u>	Annual review during AOP

7.5. Reclamation/Rehabilitation

Assess impact of wildland fire on human and natural values. Identify the roles and responsibilities of appropriate agencies and funding sources

Activity (R1) Infrastructure assessment and Agency Contacts

<u>Background</u>	During and after wildland fire incidents, there will often be impacts on the infrastructure in burn areas. These impacts may require a variety of county, State or Federal agencies to mitigate the impact and assure quality of life for the citizens of Pitkin County. Additional funding sources may need to be identified and applied that could impact service providers. To prepare for these situations, a list of possible fire impacts on the infrastructure and what agency/department would be involved in assessment and mitigation will be coordinated through the Pitkin County Emergency Management Coordinator.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	Medium
<u>Status</u>	To be done
<u>Estimated Costs</u>	Agency staff time
<u>Funding Sources</u>	Existing budgets
<u>Schedule</u>	May 2005

7.6. Fiscal

Establish funding priorities and budget strategies for management objectives

Activity (F1) Identify, prioritize and develop cost estimates

<u>Background</u>	Cooperators will identify, prioritize and develop cost estimates for common management objectives. Cooperators will be identified that can contribute an amount. Other cooperators will then be able to submit future budget requests. This process will be reviewed on an annual basis.
<u>Agencies</u>	Pitkin County Emergency Management, CSFS, USFS/BLM, AFD, SWFPD, BRFPD, CRFPD
<u>Priority</u>	Medium
<u>Status</u>	To be done
<u>Estimated Costs</u>	Agency staff time
<u>Funding Sources</u>	Existing budgets
<u>Schedule</u>	December 2004

7.7. Work Plan

Pitkin County Fire Plan- Work Plan														
	2004					2005					2006			
	Jan-March	April-June	July-Sept	Oct-Dec		Jan-March	April-June	July-Sept	Oct-Dec		Jan-March	April-June	July-Sept	Oct-Dec
Prevention Activity														
P1				Ongoing										
P2				Some agencies have resources										
P3				Ongoing										
P4				Some programs in place										
Preparedness Activity														
Pr1				Does not exist										
Pr2				Some Involvement										
Pr3				Ongoing site-dependant										
Pr4				Does not exist										
Pr5				Does not exist										
Pr6				Does not exist										
Pr7				Ongoing										
Mitigation Activity														
M1				Ongoing										
M2				In progress in Conundrum Area										
M3				Ongoing										
M4				Does not exist										
M5				Ongoing										
M6				Some programs in place										
Suppression Activity														
S1				Ongoing- City of Aspen is Compiling										
S2				Complete, but annually reviewed										
S3				Complete, but annually reviewed										
S4				Annually reviewed during AOP										
Reclamation/ Rehab Activity														
R1				Does not exist										
Fiscal Activity														
F1				Does not exist										
Priority: High=RED Medium=YELLOW Low=GREEN														

8. Maps

GIS Work Summary performed by Northwest Colorado Council of Governments- GIS Service Center

The templates for developing the maps in the Pitkin County Wildland Fire Plan were set-up in ArcGIS 9.0 and a data request was made to the Aspen/Pitkin GIS Dept for the necessary shapefiles to be used in cartographic production.

The Colorado State Forest Service (CSFS) Wildland-Urban Interface data on fire risk, hazard, and life and property “value”, as well as the final overall index were used to create maps for all of Pitkin County. NWCCOG utilized similar risk/hazard indices, created using the CSFS methodology, but utilizing more accurate, locally derived data which was used in the 2004 Castle/Conundrum Creeks watershed mapping project, was summarized and used to create new county-wide hazard maps.

Fourteen maps were ultimately produced, eight of which detail fire hazard and risk indices, and six of which detail land status/ownership, fire districts, and finer detail maps of the Crystal River, Roaring Fork, and Fryingpan River areas.

Data, Projects, and Digital Maps are contained on two CDs. Data is in ESRI “shapefile” and “grid” formats. Projects (.mxd) were created using ArcMap 9.0 (SP2). Digital maps were exported, using ArcMap 9.0, into Adobe Acrobat (.pdf) files, as well as .jpeg image format. Map descriptions and data directory locations are listed below:

Data

- Source for base data was Aspen/Pitkin County GIS Department
- Source for all fire hazard, risk, and value and final risk indices were the Colorado State Forest Service and the Northwest Colorado Council of Governments
- Data is contained in the directory as follows (if no “L:” drive exists on the user’s computer they must redirect all source data in the .mxds to the location they saved the data to): L:\PitkinFire\04FirePlan\Data

Projects

- Twelve map projects (.mxds) exist
- Directory location: L:\PitkinFire\04FirePlan\Projects

Maps

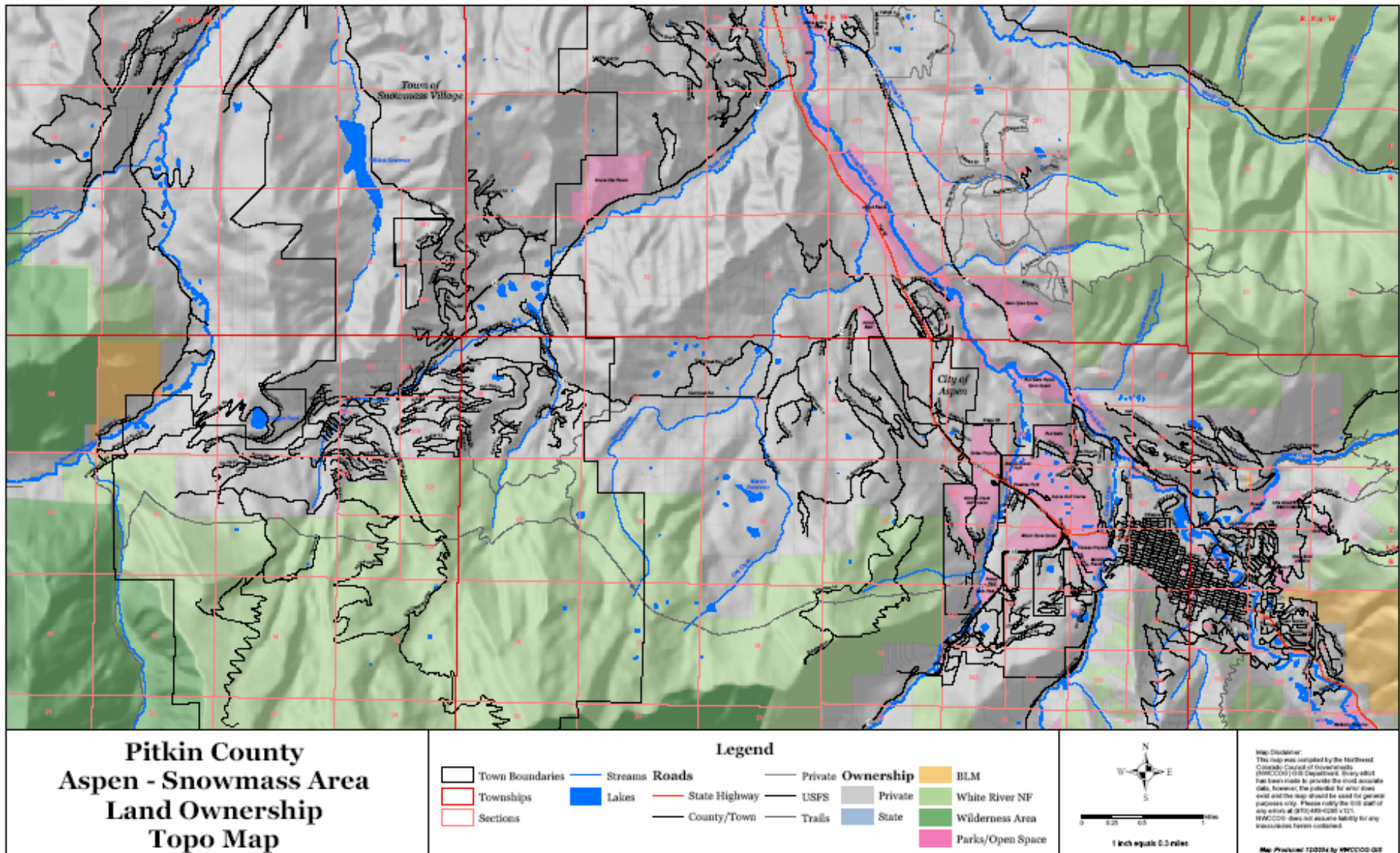
- Exported to .pdf and .jpeg (600 dpi) formats
- All maps are D-Size (22 x 34 inches), a size optimal for displaying detailed text and line work. If a smaller B-Size (11 x 17 inches) is desired, user can print maps at 50% of original size
- **CountyFireDistricts**, map of fire protection districts and topography in Pitkin County, including fire station names/locations
- **CountyLandStatus**, map of land ownership and topography in and surrounding Pitkin County
- **Aspen_SnowLandStatus**, map of land ownership and topography, zoomed in on the main town areas of Aspen and Snowmass Village

- **CrystalRiverArea**, map showing parcels/land ownership and contours/topo, along the Crystal River
- **FryingpanRiverArea**, map showing parcels/land ownership and contours/topo, along the Fryingpan River
- **RoaringForkArea**, map showing parcels/land ownership and contours/topo, along the Roaring Fork River (from Basalt to Snowmass Village)
- **CSFS_WUI_risk**, map showing the CSFS, wildland-urban interface risk assessment (probability of ignition), see documentation for methodology
- **CSFS_WUI_hazard**, map showing the CSFS, wildland-urban interface hazard assessment (fuels and topography), see documentation for methodology
- **CSFS_WUI_value**, map showing the CSFS, wildland-urban interface value assessment (life and property), see documentation for methodology
- **CSFS_WUI_final**, map showing the CSFS, wildland-urban interface final assessment (risk + hazard + value) index, see documentation for methodology
- **NWCCOG_WUI_hazard**, map showing hazard assessment (fuels and topography) utilizing larger scale (more detailed) USFS and GAP vegetation data, developed using the same methodology as the CSFS, wildland-urban interface hazard assessment, see documentation for methodology
- **NWCCOG_WUI_hazard2**, map showing hazard assessment (fuels and topography) utilizing larger scale (more detailed) USFS and Pitkin County vegetation data, developed using the same methodology as the CSFS, wildland-urban interface hazard assessment, see documentation for methodology
- **NWCCOG_WUI_final**, map showing the final wildland-urban interface assessment, compiled using the NWCCOG's version of hazard assessment (with USFS and GAP vegetation) with the CSFS risk and value assessment to create the overall index, see documentation for methodology
- **NWCCOG_WUI_final2**, map showing the final wildland-urban interface assessment, compiled using the NWCCOG's version of hazard assessment (with USFS and Pitkin County vegetation) with the CSFS risk and value assessment to create the overall index, see documentation for methodology

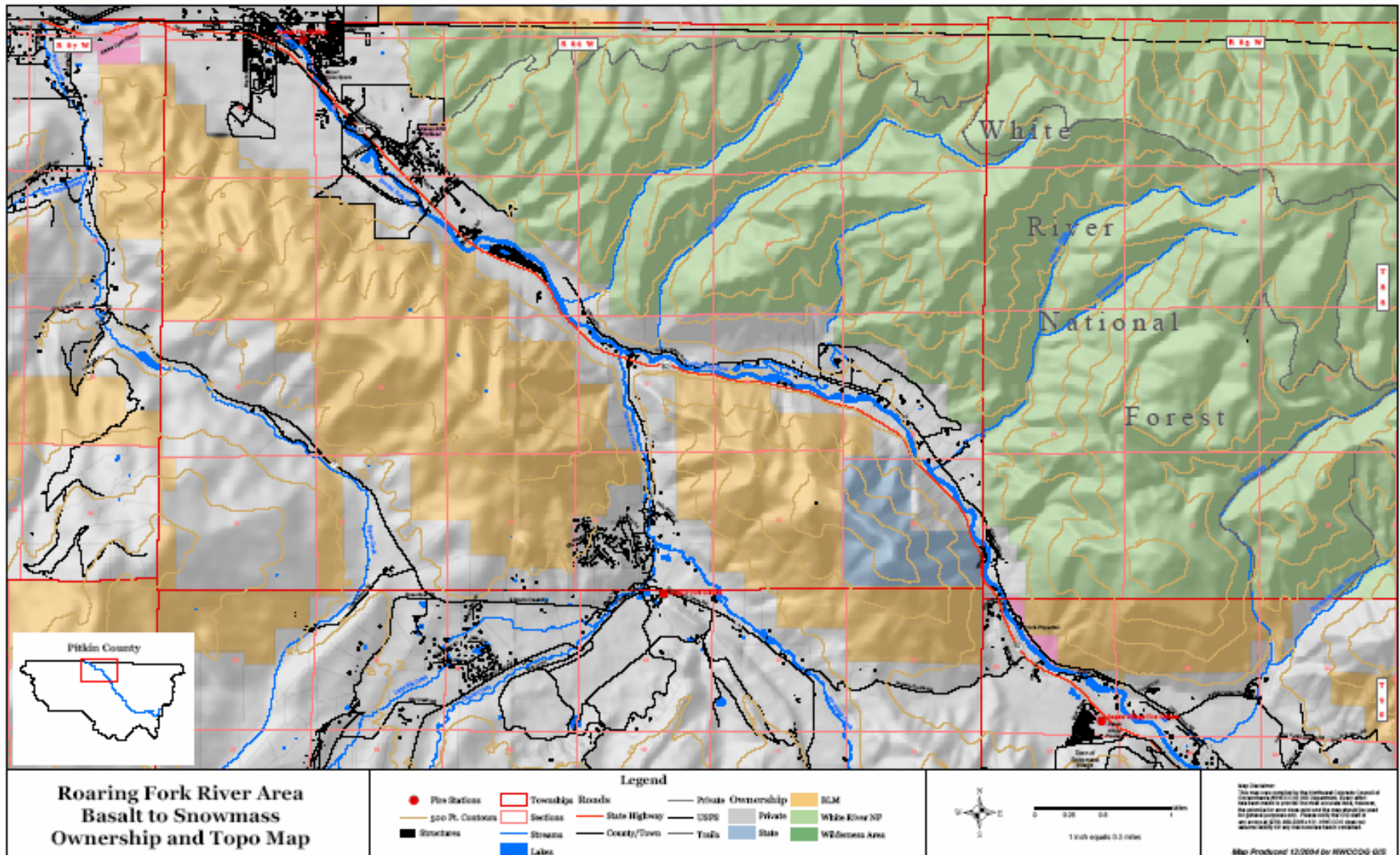
Please direct any questions, comments, or errors to:

Jodi Flory
NWCCOG GIS Specialist
PO Box 2308
249 Warren Ave
Silverthorne, CO 80498
(970) 468-0295 x121
gis@nwc.cog.co.us

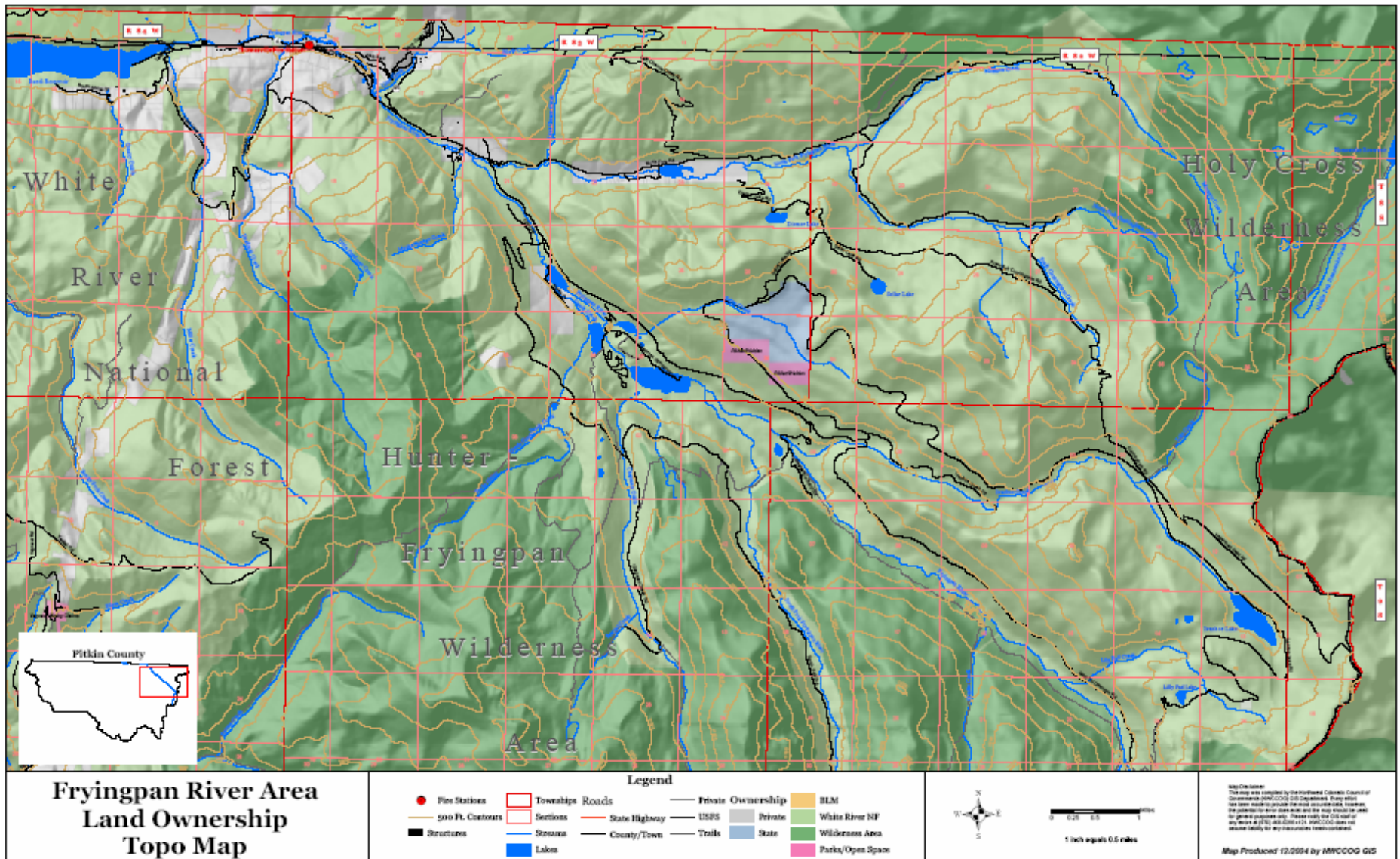
8.1. Aspen/Snowmass Land Ownership & Parcel Map



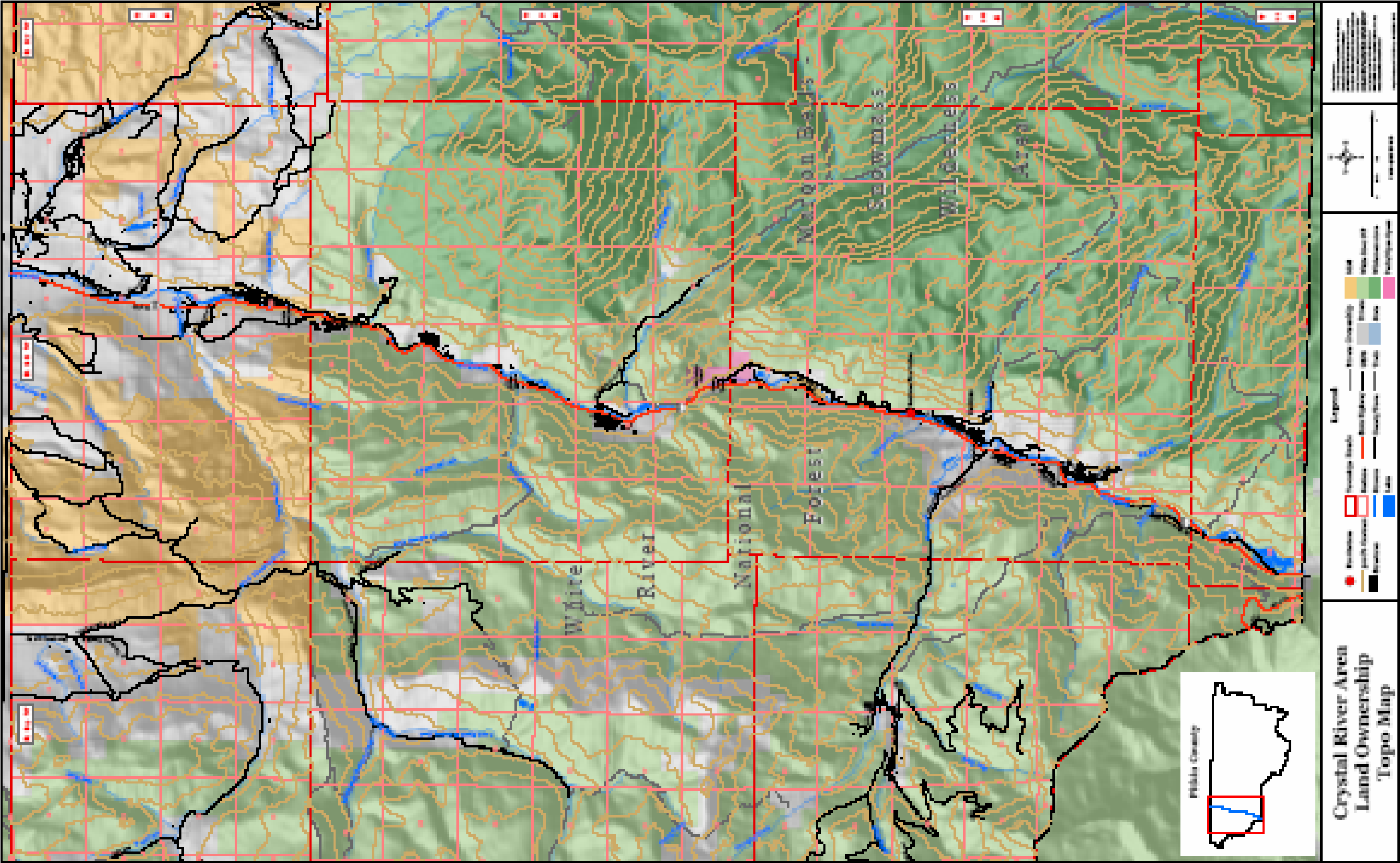
8.2. Roaring Fork Area Land Ownership & Parcel Map



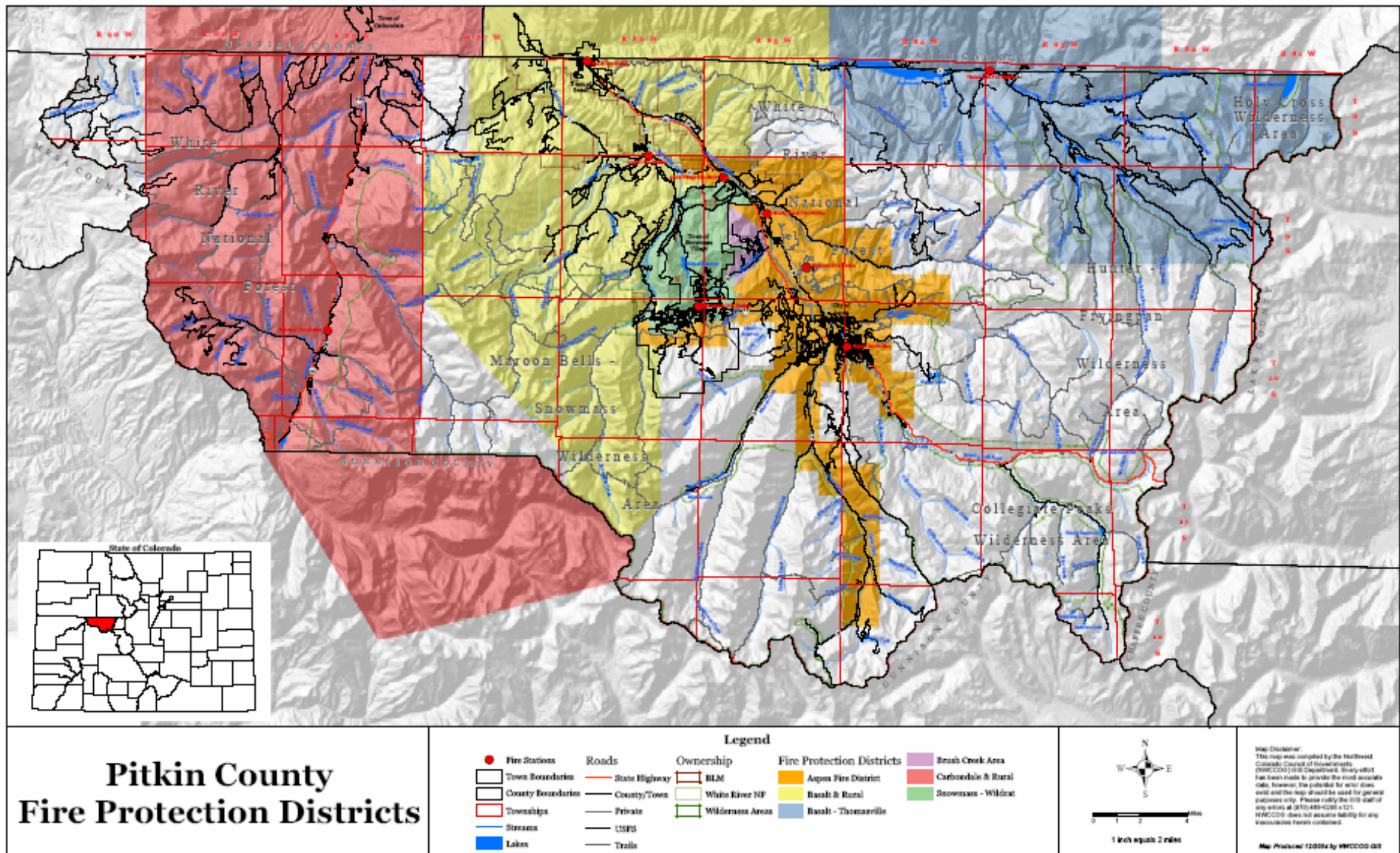
8.3. Upper Fryingpan Area Land Ownership & Parcel Map



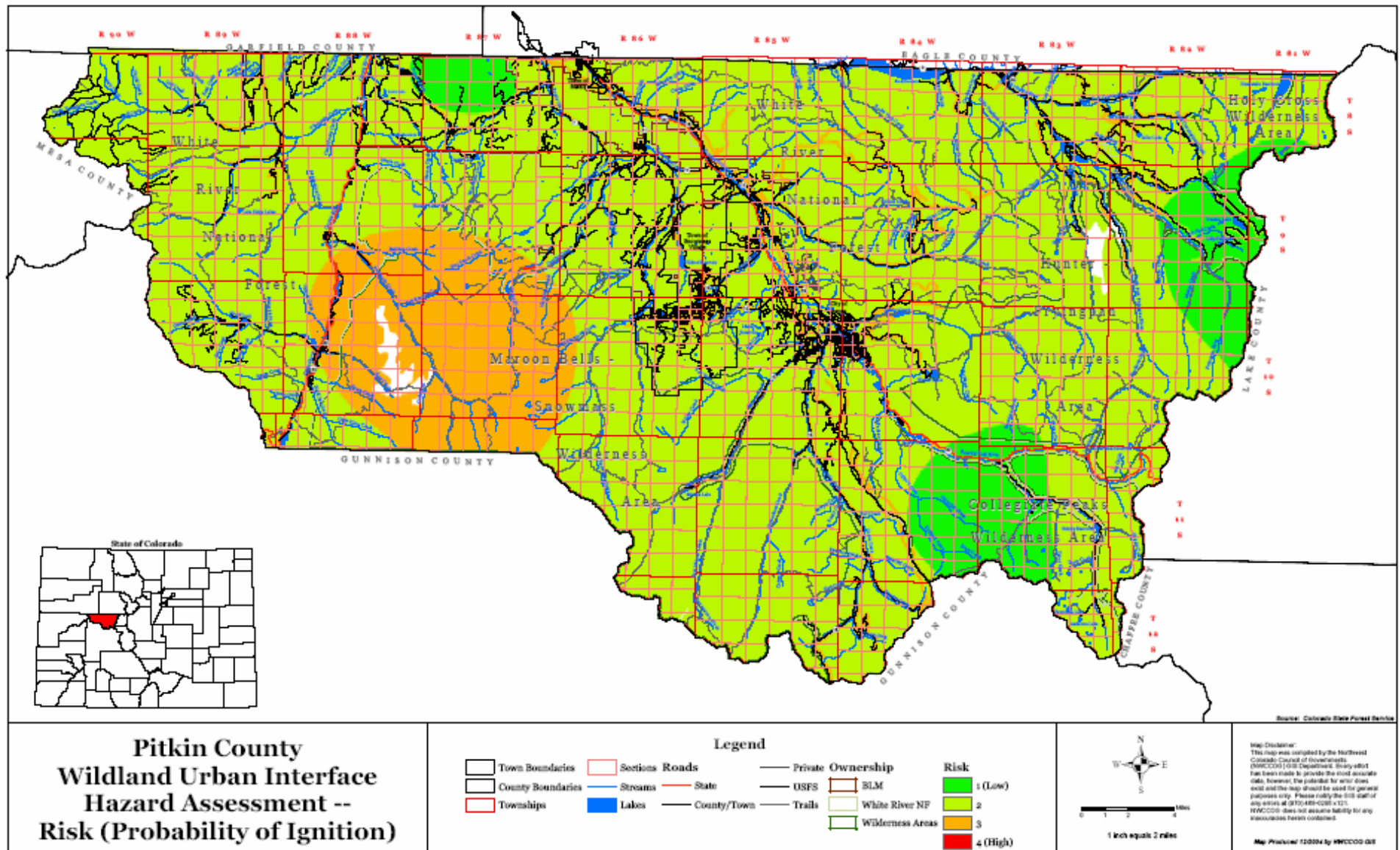
8.4. Crystal River Valley Land Ownership & Parcel Map



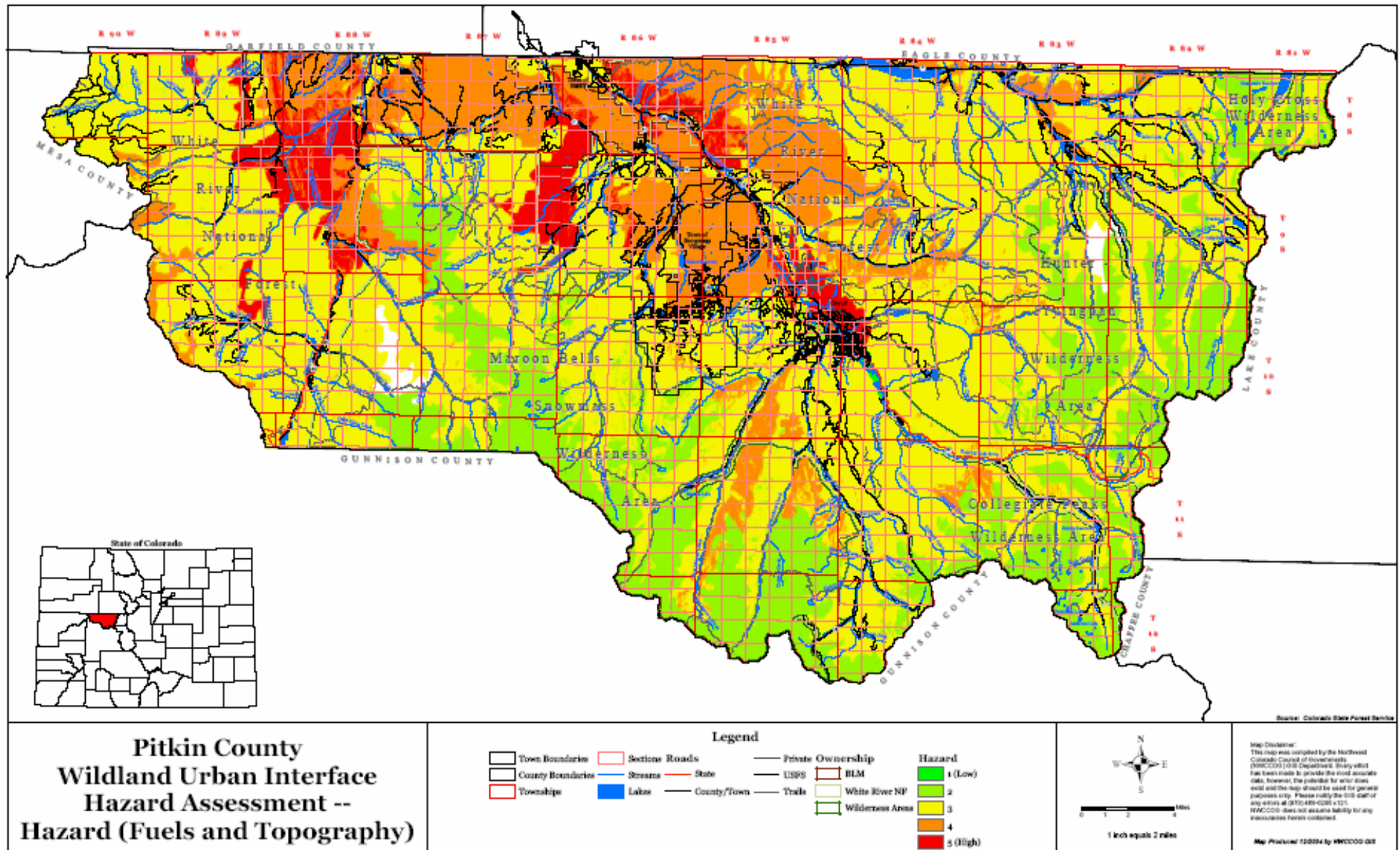
8.5. Fire Protection Districts



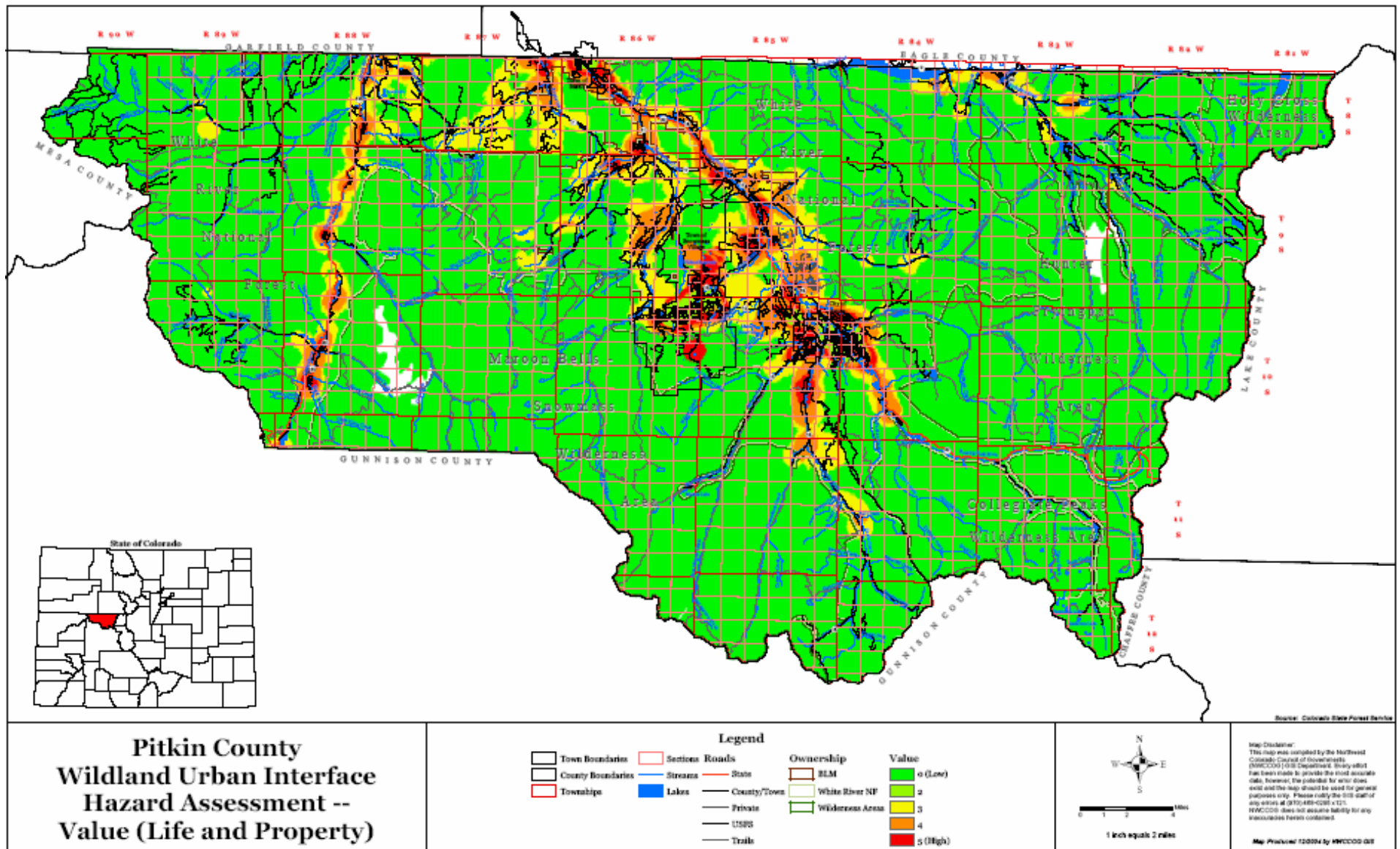
8.6. CSFS Wildland Fire Risk Values (Probability of Ignition)



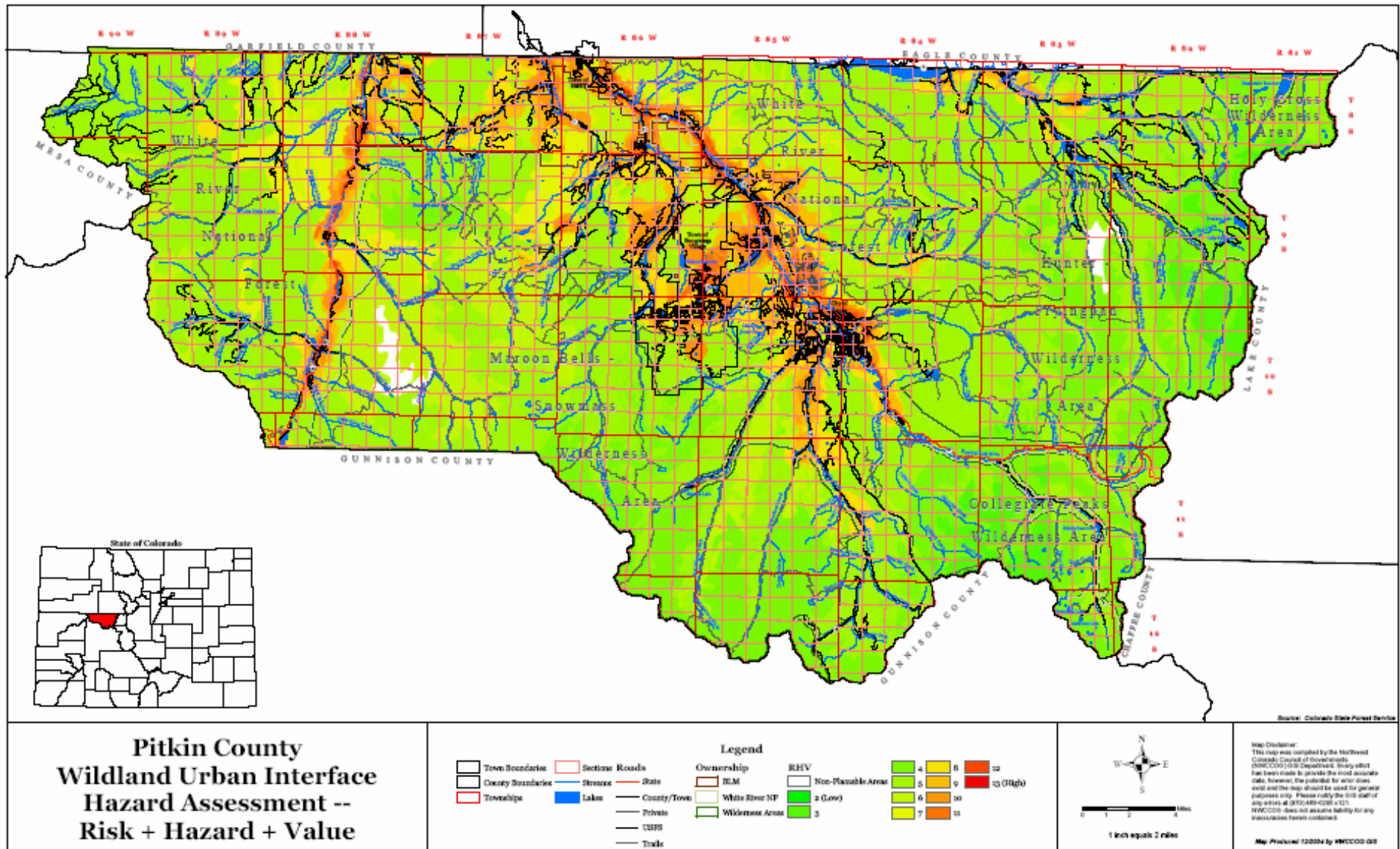
8.7. CSFS Wildland Fire Hazard



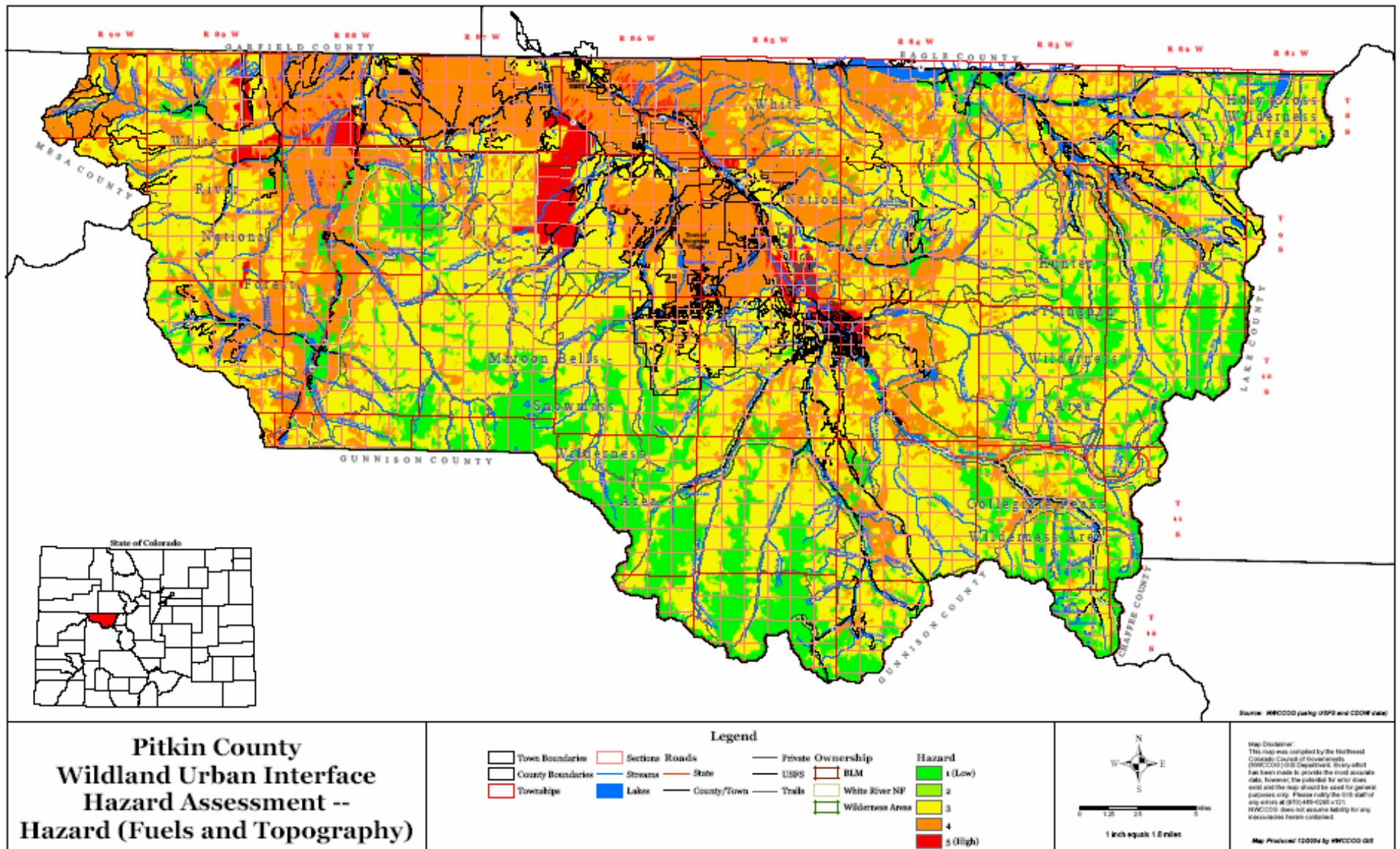
8.8. CSFS Wildland Fire Values at Risk Map



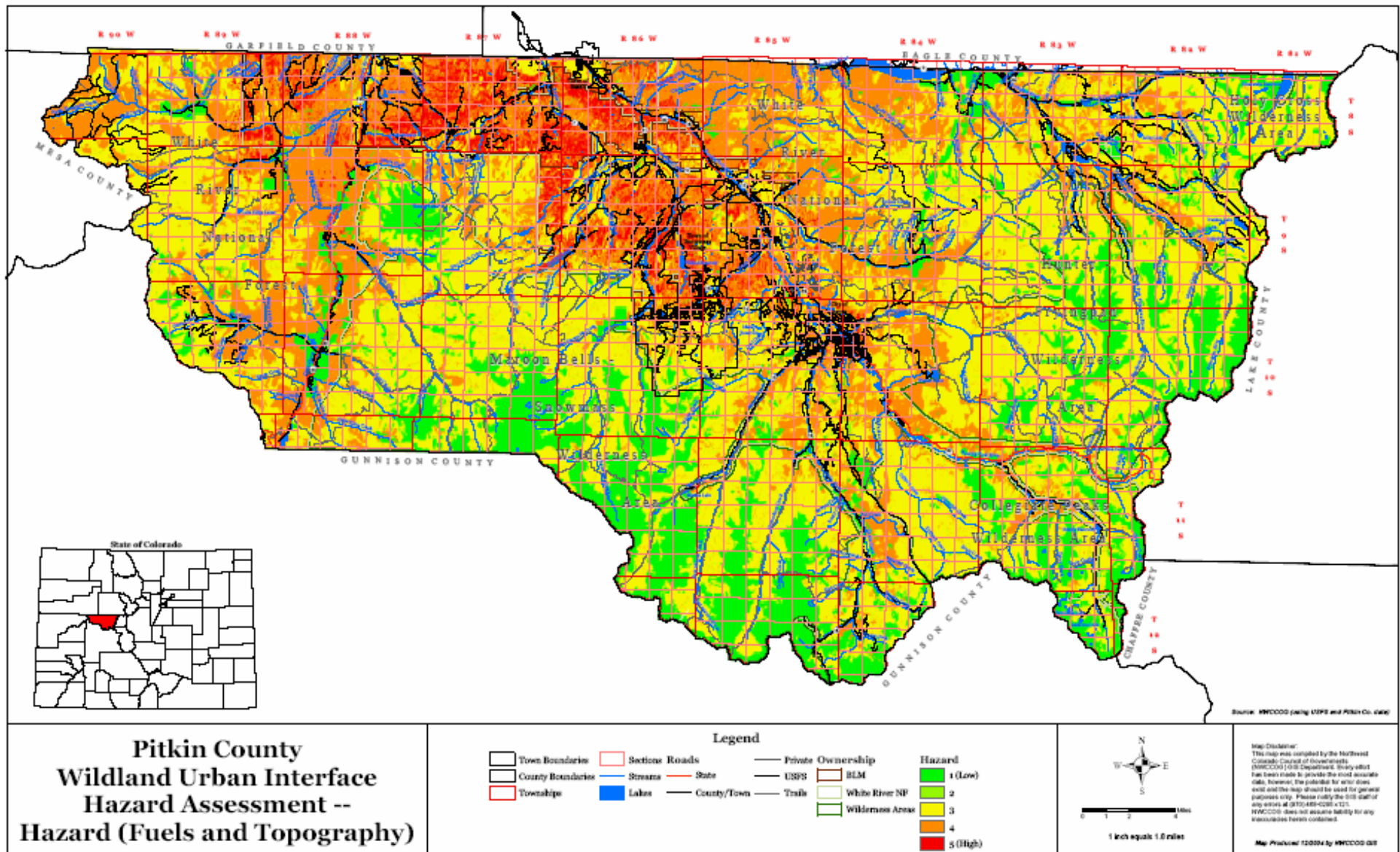
8.9. CSFS Wildland Fire Hazards (Risk + Hazard + Value)



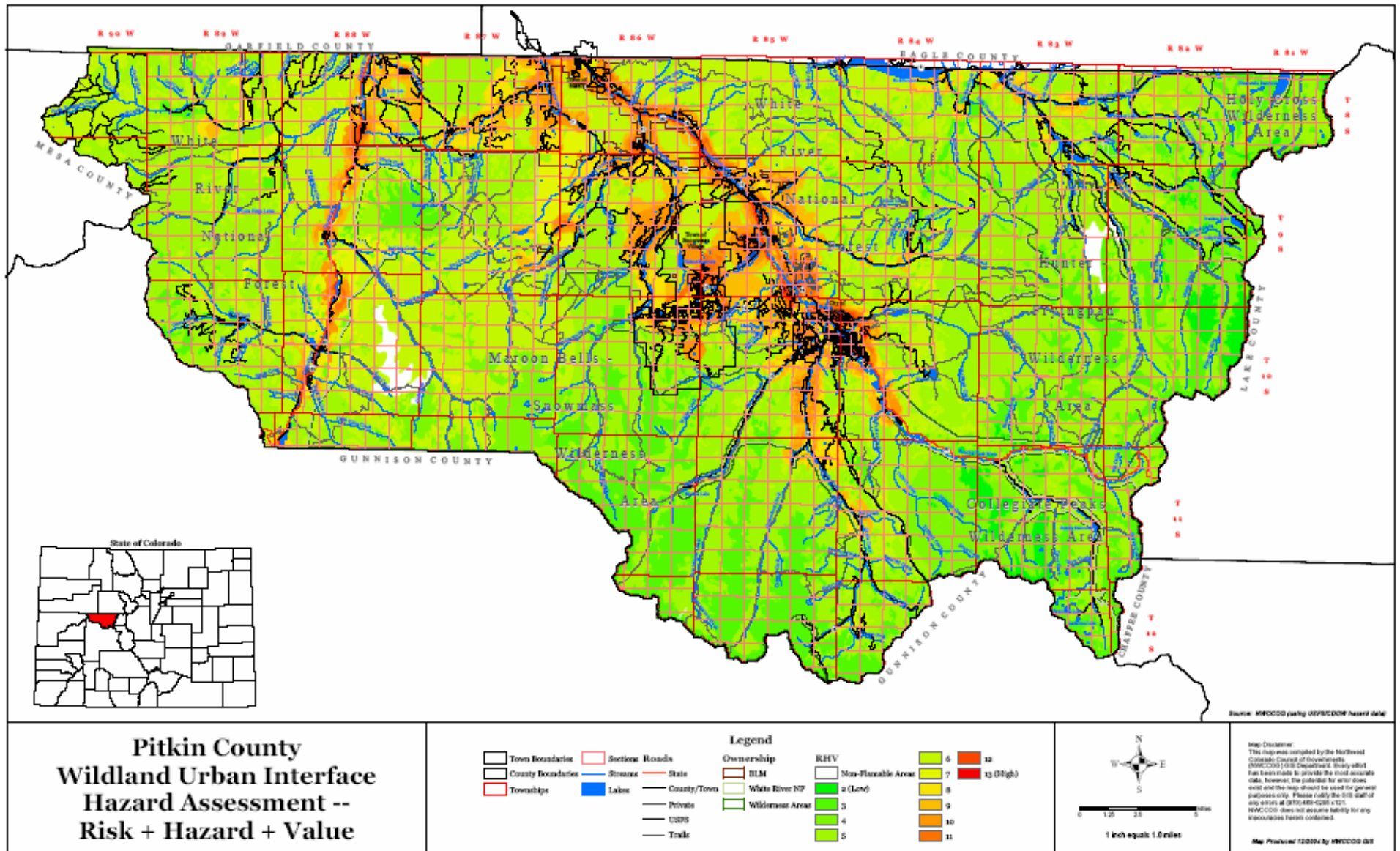
8.10. USFS/GAP Wildland Fire Hazard



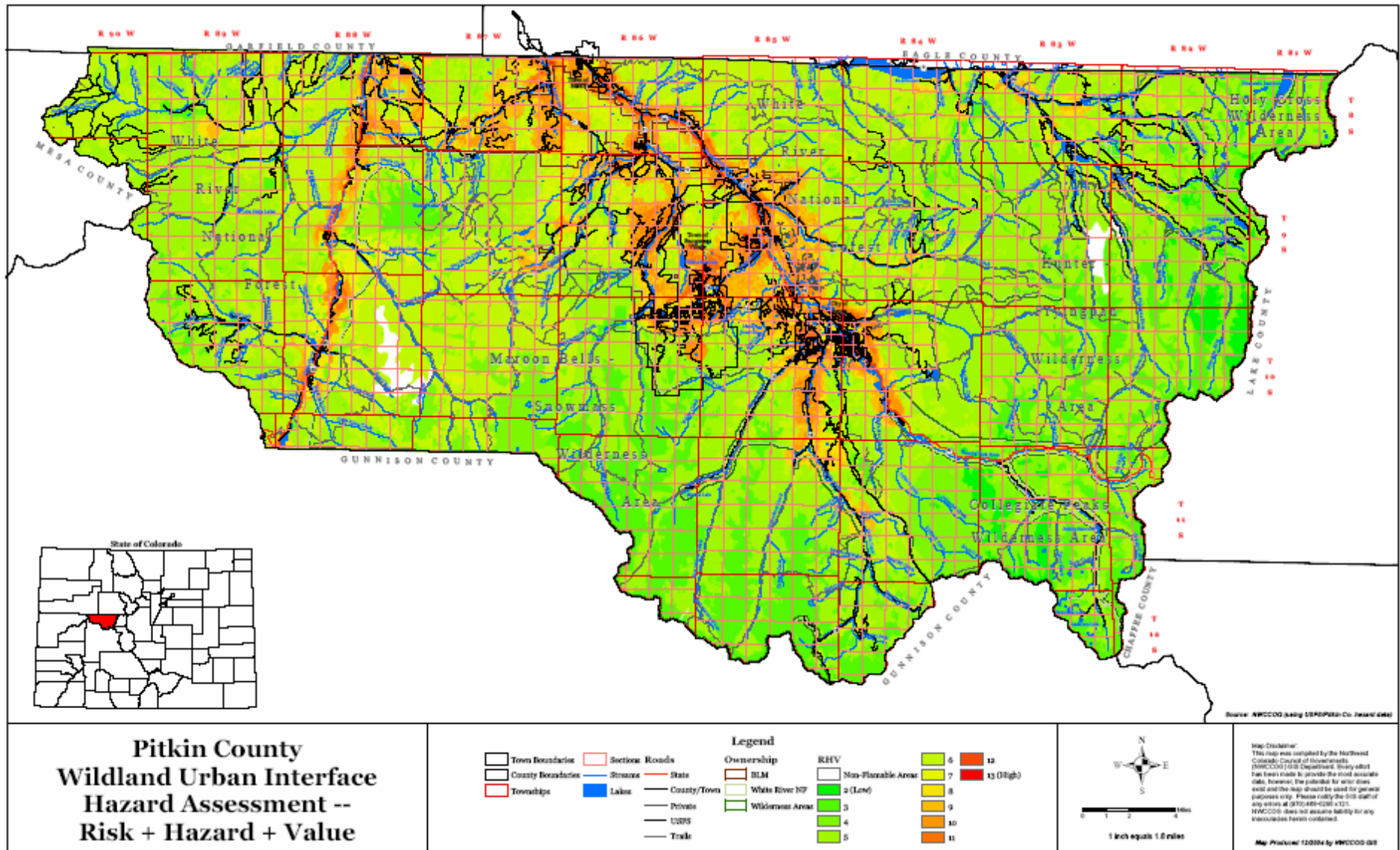
8.11. USFS/Pitkin Wildland Fire Hazard



8.12. USFS/GAP Wildland Fire Hazards (Risk + Hazard + Value)



8.13. USFS/Pitkin Wildland Fire Hazards (Risk + Hazard + Value)



9. Report Author

The primary author for this report is Eric Petterson of Rocky Mountain Ecological Services, Inc. Mr. Petterson holds a Masters of Science Degree in Rangeland Ecosystem Science (emphasis on fire ecology) and a Bachelors of Science Degree in Wildlife Biology from Colorado State University. Mr. Petterson has 13 years of natural resource planning and management experience. He has authored numerous Wildfire Hazard Reviews for Pitkin County, and has authored three Community Wildfire Protection Plans in the Roaring Fork Valley. Mr. Petterson has also conducted fuels inventories and management recommendation reports for 5 Colorado State Parks. As a contractor, Mr. Petterson has performed various assessments and planning tasks on the Cerro Grande, Missionary Ridge, Burn Canyon, Big Fish, Eldorado Canyon, and Hayman fires. Prior to being a consultant/contractor, Mr. Petterson was a Fuels Planner on the Canyon Lakes Ranger District on the Arapaho/Roosevelt National Forest. As a fuels planner, Mr. Petterson was the Project Manager for five prescribed fires, ranging in size from 300 acres to 7,000 acres, as well as combination mechanical treatment/prescribed fire projects. Mr. Petterson was with the USDA Forest Service for 10 years. Mr. Petterson has managed Rocky Mountain Ecological Services since 2000.

10. Appendices

I. Interagency Agreements

Details roles and responsibilities of agencies in fire plan process (to be inserted as available).

II. Memorandum of Understanding for Pitkin County Wildland Fire Plan

Details mutual commitment to achieving objectives in plan

III. 1041 Wildfire Hazard Mitigation Guidance

The following is a copy of the 1041 guidance in the Pitkin County Land Use Standards. These standards are undergoing a re-write, and new Standards may be adopted in late 2005.

3-80-070 Wildfire Hazard Areas

This section establishes: (1) the standards for development in wildfire hazard areas; and (2) the applicable review process for such development.

A. Development standards.

1. Definitions.

a. Severe Hazard Wildfire Areas. Severe hazard wildfire areas shall consist of the following areas (in all cases mapping will be field verified by the Colorado State Forest Service, the Pitkin County Sheriff's Department or a person certified by Pitkin County as an expert in wildfire hazard areas and wildfire mitigation, hereinafter referred to as "wildfire experts"):

Areas that are not mapped but are identified by wildfire experts as areas containing "A -- Low Hazard: Trees and Grass," "B -- Medium Hazard: Trees" wildfire hazard.

i) Areas designated as "C -- Severe Hazard: Trees" or "X -- Severe Hazard: Brush" wildfire hazard on Pitkin County's adopted wildfire hazard area maps.

ii) Areas that are not mapped but are identified by wildfire experts as areas containing "C -- Severe Hazard: Trees" or "X -- Severe Hazard: Brush" wildfire hazard.

iii) Areas that are incorrectly mapped and are identified by wildfire experts as areas containing "C -- Severe Hazard: Trees" or "X -- Severe Hazard: Brush" wildfire hazard.

b. Low and Medium Hazard Wildfire Areas. Low and medium hazard areas shall consist of the following areas (in all cases mapping will be field verified by the Colorado State Forest Service, the Pitkin county Sheriff's Department or a person certified by Pitkin County as an expert in wildfire hazard areas and wildfire mitigation, hereinafter referred to as "wildfire experts"):

i) Areas designated as "A -- Low Hazard: Trees and Grass", "B -- Medium Hazard: Trees" wildfire hazard on Pitkin County's adopted wildfire hazard area maps.

iii) Areas that are incorrectly mapped and are identified by wildfire experts as areas containing "A -- Low Hazard: Trees and Grass," "B -- Medium Hazard: Trees" wildfire hazard.

2. Building Envelope and Wildfire Hazard Area Delineation.

Concurrent with building permit submittal, a site plan that meets the requirements of Section 5-70-040 shall be submitted that delineates all development within a building envelope (wildfire mitigation, and creation of defensible space, may occur outside of the building envelope). Wildfire hazard areas shall be delineated within the building envelope consistently with the definitions of Subsection 3-80-070A.1;

provided that, in the case of varying hazard levels within the building envelope, it shall be sufficient to label the entire envelope with the highest level hazard. The building envelope, and a hundred-foot radius surrounding all structures shall be clearly labeled as either: low hazard; medium hazard; or severe hazard.

3. Development Standards.

a. Severe Hazard Wildfire Areas. Development is prohibited within any severe hazard wildfire area, unless it is determined pursuant to the process of Subsection 3-80-070B. that: (1) there is no alternative development area on the property that is free of "C -- Severe Hazard: Trees" or "X -- Severe Hazard: Brush" wildfire hazards; or (2) development within the severe wildfire area is preferable to alternative low or medium hazard site(s) because of other hazard concerns relating to the alternative site(s). Development permitted in severe hazard wildfire areas pursuant to this section shall be subject to the standards of Subsection 3-80-070A.3.b below, and the following additional 170 a) Projections at the roofline (which include, but are not limited to: eaves, cornices, soffits and roofs over open decks) shall be sheathed with materials approved for one-hour fire-resistive construction. Structural design and construction standards (which may be varied upon recommendation by the wildfire expert):

i. Projections (Heat Traps)

b) For projections below the roof line (including, but not limited to: exterior balconies, decks, porches, cantilevered floor projections, and bay windows which extend over a flat or sloped surface), the open space between grade and the underside of projections below the roof line shall be enclosed by solid, vertical walls. These walls shall be constructed with materials approved for one-hour fire-resistive construction on the exterior side of the wall and shall extend from the top of grade to the underside of the floor decking or walls of the projection.

c) An alternative construction method for such projections would require use of non-combustible building materials, or heavy timber or log wall construction, if the underside of the projecting portion is covered with materials approved for one-hour fire-resistive construction and if there are no inside angles of less than seventy-five degrees (75°). Areas below such projections shall be void of vegetative or other combustible materials. These areas below projections shall be protected from accumulation of vegetative materials by placement of a vegetative barrier covered with racks or gravel or by coverage with concrete or stone. There shall be no storage of combustible materials under projections. The walls underneath projections shall be constructed with materials approved for one-hour fire-resistive construction on the exterior side of the wall. Window openings in walls below projections shall be tempered glass. Doors shall be noncombustible or one and three-fourths inch (1 $\frac{3}{4}$ ") solid wood.

ii. Windows and Glass: Glazed openings shall be provided with closable, solid, exterior non-flammable shutters or shall be tempered glass.

iii. Exterior Walls and Siding: Siding and exterior wall construction shall have a minimum one-hour fire-resistive rating, ground level to roof line. Exterior doors shall be noncombustible or one and three-fourths inch (1 $\frac{3}{4}$ ") solid wood.

iv. Foundations: Foundations, skirting and crawl space openings shall be fully enclosed and constructed with materials approved for one-hour fire-resistive construction on the exterior side of the walls and shall extend from the top of grade to the underside of the floor decking or walls.

v. Stilt Construction: The underside of decks and structures with stilt foundations shall be fully enclosed and constructed with materials approved for one-hour fire-resistive construction on the exterior side of the walls and shall extend from the top of grade to the underside of the floor decking or walls.

Low and Medium Hazard Wildfire Areas. Development is allowed, subject to conformance with the following development standards: e) Tree crown separation within the thirty-foot (30') perimeters shall have a minimum of ten feet (10') between the edges of the crowns, except for mature stands of Aspen trees where ladder fuels have been removed. In areas of Aspen regeneration, the spacing guidelines of Subsection ii.c. above shall be followed.

i. Location: No development shall be located in draws, canyons or on slopes greater than thirty percent (30%) unless the Community Development Department determines there is no alternative site available on the property.

ii. Defensible Space: The area around all buildings/structures, limited by property boundaries which may limit a property owner's ability to comply with this section, shall incorporate landscaping with wildfire defensible space considerations as follows (note: Actual vegetation manipulation to meet these conditions may not be necessary where the natural vegetation patterns have already fulfilled these conditions):

a) Brush, debris and non-ornamental vegetation shall be removed within a minimum ten-foot (10') perimeter around all structures.

b) Vegetation shall be reduced to break up the vertical and horizontal continuity of the fuels at a minimum of a thirty-foot (30') foot perimeter around a structure built on flat ground. (For greater slopes, reference CSFS Safety Zone chart, page 13, Wildfire Guidelines For Rural Homeowners.)

c) Spacing between clumps of brush and vegetation within the thirty-foot (30') perimeter shall be a minimum of two (2) times the height of the fuel. Maximum diameter of the clumps shall be two (2) times the height of the fuel. All measurements shall be from the edges of the crowns of the fuel.

d) All branches from trees and brush within the thirty-foot (30') perimeter shall be pruned to a height of ten feet (10') above the ground with removal of ladder fuels from around trees and brush.

f) All branches that extend over the roof eaves shall be trimmed and all branches within fifteen feet (15') of chimneys shall be removed.

g) The density of fuels within a one-hundred-foot (100') perimeter of the structures shall be reduced where natural reduction has not already occurred.

h) All deadfall within the one-hundred-foot (100') perimeter shall be removed.

i) The property owner shall be responsible for the continued maintenance of the defensible space vegetation requirements.

3-80-070.A.3.b.iii Structural Design and Construction Requirements

1) All roof coverings shall be constructed of non-combustible materials and installed on a Class A roof assembly. c) All flammable materials shall be stored on a parallel contour a minimum of fifteen feet (15') away from any structure.

a) Roofing: Unless the wildfire expert has recommended a different method of construction due to proximity to a severe wildfire area, in low and medium wildfire areas, roofs shall be constructed with a Class A roof covering or a Class A assembly as defined in the International Building Code (IBC) Section 1505.2. In severe wildfire areas, roofs shall be constructed with a roof covering of non-combustible materials installed on a Class A roof assembly. Non-combustible materials shall be one of the following: cement shingles or sheets; exposed concrete slab roof; ferrous or copper shingles or sheets; slate shingles; clay or concrete roofing tile; or an approved roof covering of non-combustible material. Wood shake/shingle roof coverings are prohibited in all wildfire hazard areas. Roofs with less than a 3:12 pitch are not permitted in wildfire areas unless they comply with the following:

2) All roof coverings shall have a surface that shall facilitate the natural process of clearing the roof.

3) All roof designs shall facilitate the natural process of clearing roof debris. Protrusions above the roofline, such as parapets, shall be prohibited.

4) Roofs shall be installed as required by the adopted building code and shall have a minimum slope of 1:48.

5) All roof designs, coverings or equivalent assemblies shall be specifically approved by the Fire Marshall prior to submittal of a building permit application.

b) Vents: Vents shall be screened with corrosive resistant wire mesh, with mesh one-fourth inch (1/4") maximum.

iv. Maintenance

a) Roofs and gutters shall be kept clear of debris.

b) Yards shall be kept clear of all litter, slash and flammable debris.

d) Weeds and grasses within the ten-foot (10') perimeter shall be maintained to a height not more than six inches (6").

v. Miscellaneous

a) Firewood/wood piles shall be stacked on a parallel contour a minimum of fifteen feet (15') away from the structure.

b) Swimming pools shall be accessible by the Fire Departments. e) Any outbuildings or additional structures shall adhere to the same standards as structures. b) New dead-end streets (not including cul-de-sacs) shall not be permitted.

c) Fences shall be kept clear of brush and debris.

d) Wood fences shall not connect to the structure.

f) Fuel tanks shall be installed underground with an approved container.

g) Propane tanks shall be installed according to NFFA 48 standards and on a contour away from the structure with standard defensible space vegetation mitigation around any aboveground tank. Any wood

enclosure around the tank shall be constructed with materials approved for two (2) hour fire-resistive construction on the exterior side of the walls.

h) Each structure shall have a minimum of one ten (10) pound ABC fire extinguisher.

i) Addresses shall be clearly marked with two-inch (2") non-combustible letters and shall be visible at the primary point of access from the public or common access road and installed on a non-combustible post.

vi. Access

a) Access roads shall be built to County standards; however, these standards may be increased to mitigate wildfire hazards based on comments provided by the Colorado State Forest Service, the Sheriff's Department, local fire protection districts and/or a person approved as an expert in wildfire areas and mitigation. Where feasible, looped routes of access/egress to the main artery/highway shall be incorporated in the design of a proposed development. Looped routes of access/egress is defined as two (2) or more dedicated access roads to the main artery/highway for widely separated ingress/egress; looped drives with one entrance point or divided single entrances do not satisfy this condition. Where this is not feasible, the Community Development Department may approve vehicular turnaround areas a maximum of seven hundred fifty feet (750') apart installed between the road intersection and its terminus. Turnaround areas shall be the same standard as cul-de-sac turnaround pads; these may be incorporated into the proposed driveway entries.

c) Cul-de-sac turnaround pads shall have a minimum of a thirty-foot (30') drivable surface inside turning radius.

d) New driveways and access roadway shall enter the roadway at a ninety-degree (90°) angle for the first twenty-five feet (25') of the driveway.

b) Any fire department recommendation for individual structure water supply and storage shall be accessible to fire department vehicles from the exterior of the structure through a Fire Department approved mechanism (such as a fire hydrant). The amount of storage capacity shall be determined by the fire protection district with a minimum of one thousand (1,000) gallon storage capacity per structure.

e) Fuel breaks shall be incorporated into the roadways of the subdivision for one hundred feet (100') on each side of the roadway. (For greater slopes, reference CSFS Fuelbreak Guidelines for Forested Subdivisions.)

Note: Actual vegetation manipulation to meet this condition may not be necessary where the natural vegetation patterns have already fulfilled these conditions.

vii. Water Supply.

a) When access to a public or private pressurized water system is not available or if it is necessary to augment fire protection water systems, private ponds may be used if approved by the Community Development Department.

c) Regardless of size, all structures (including detached garages and horse barns) located within areas identified as containing "C -- Severe Hazard: Trees" or "X -- Severe Hazard: Brush" wildfire hazard shall be required to install in-house sprinkler systems which meet the standards of the local fire protection district and the approved building code.

d) All structures greater than five thousand (5,000) square feet in size shall be required to install in-house sprinkler systems that meet the standards of the local fire protection district and the Uniform Building Code. At building permit submittal, the local fire protection district may require smaller structures to be sprinkled due to hazard considerations, emergency access difficulties and lack of proximity to fire protection services.

viii. Utilities: Utility lines shall be buried.

ix. Additional: Additional recommendations from the Colorado State Forest Service, the Pitkin County Sheriff's Department, the local fire protection district and/or a person certified by the Community Development Department as an expert in wildfire areas and wildfire mitigation may be incorporated into any conditions of approval as necessary to mitigate wildfire hazards.

B. Review Process.

All development shall be reviewed for compliance with this section based on the procedure set forth below, unless additional reviews are required, in which case the applicable reviewing bodies shall be the decision makers. The Community Development Department may require a site visit to determine compliance with these provisions, and may charge a fee to defray the cost of reviewing the application.

1. Building Permit Sign-Off. All development shall be reviewed for compliance with this section. Along with a building permit application, the property owner shall consult with a wildfire expert and submit a site plan that conforms to the requirements of Subsection 3-80-070A.2. Prior to building permit issuance, the Community Development Department shall determine that the proposed development meets the criteria of this section and sign-off on the building permit and the certificate of occupancy.

2. Optional Administrative Process. An optional administrative process is available for approvals desired prior to building permit submittal. If an approval is granted, such approval shall vest pursuant to the terms of Section 4-140 for a period of three years.

3. Notice. Building permit sign-off reviews associated with development in severe wildfire areas only shall be noticed within fifteen (15) days after receipt of an application by publishing notice of the review. Such notice shall be published once in a newspaper of general circulation in the county, not less than fifteen (15) days nor more than sixty (60) days before the date of the anticipated administrative decision. Administrative reviews shall be noticed pursuant to Section 4-90 and the notice requirements for caretaker dwelling units.

4. Appeal. An appeal pursuant to Section 3-290 and/or Section 3-300 is available to any party aggrieved by a decision rendered pursuant to this section. (Ord. 10-2003 Att. A; Ord. 07-2002 Att. A; Ord. 40-2000, Att. A; Ord. 99-39)

IV. Pitkin County Annual Operating Plan

To be inserted as updated.

V. Target Areas of Concern for Pitkin County Fire Protection Districts

10.1.1. *Aspen FPD*

1. Roads
 - 1.1. Castle Creek
 - 1.2. Conundrum Creek
2. Subdivisions
 - 2.1. Red Mountain
 - 2.2. Mountain Valley
 - 2.3. Woody Creek

10.1.2. *Snowmass-Wildcat FPD*

To be inserted as available or updated.

10.1.3. Basalt & Rural FPD

1. Roads
 - 1.1. Hillcrest Drive
 - 1.2. Original Road
 - 1.3. Cedar Drive
 - 1.4. Stone Road
2. Subdivisions
 - 2.1. The Wilds Townhomes
 - 2.2. Sopris Mountain Ranch Subdivision
 - 2.3. Shield O Mesa
 - 2.4. Missouri Heights areas

10.1.4. Carbondale & Rural FPD

1. Redstone Area
 - 1.1. Special Buildings
 - 1.1.1. Redstone Inn
 - 1.1.2. Redstone Castle
 - 1.2. Unique Areas
 - 1.2.1. Campground at Redstone
 - 1.3. Subdivisions/ High Density Areas
 - 1.3.1. Redstone Ranch Acres
 - 1.3.2. Elk Mountain Subdivision
 - 1.3.3. North of North Bridge at Redstone
 - 1.3.4. Filoha Meadows
 - 1.3.5. Crystal River Park
2. Crystal River Valley
 - 2.1. Unique Areas
 - 2.1.1. Individual Ranches
 - 2.1.2. Alabaster Mine

2.1.3. Campground at Avalanche Ranch

2.2. Subdivisions/ High Density Areas

2.2.1. Crystal River Country Estates

2.2.2. BRB/Seven Oaks

2.2.3. Swiss Village

2.2.4. Avalanche Ranch

2.2.5. Prince Creek

2.2.6. Red Dog Road

2.2.7. Thompson Creek Areas (Sustainable Settings, etc.)

10.1.5.USFS/BLM

To be inserted as available